

A PSYCHIATRIC STUDY OF THE NEURODERMATOSES

JACK MORRISON WHITE

B.Sc., M.B., Ch.B., D.P.M.

THESIS FOR DEGREE OF M.D. OF THE UNIVERSITY OF GLASGOW

March, 1954.

ProQuest Number: 13838679

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 13838679

Published by ProQuest LLC (2019). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code
Microform Edition © ProQuest LLC.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

ACKNOWLEDGEMENTS

This author gratefully acknowledges the encouragement received from Dr. T.J. Hennelly, Medical Superintendent, Whitchurch Hospital, and is indebted to him for permission to carry out this work. He is also indebted to Drs. J.P. Spillane and D. Lewis, and other medical colleagues of Whitchurch Hospital, for their cooperation, and advice. The encouragement and guidance of Dr. A.J. Rook, Addenbrook^e's Hospital, Cambridge, is gratefully acknowledged, and that of his former colleagues in the Department of Dermatology, Cardiff, Royal Infirmary. The author sincerely appreciates the help given him by his associates in certain sections of this work. Acknowledgement is due to Dr. J. Crossland, Department of Physiology, St. Andrew's University (formerly of the Research Centre, Whitchurch Hospital) for the biological assays of serum acetylcholine; to Mrs. A.M. Jones, Clinical Psychologist, Whitchurch Hospital, for carrying out the Rorschach tests and for advice; and to Dr. J.G. Ingham, Research Psychologist, Whitchurch Hospital, for guidance in the statistical analysis of the Rorschach findings and for his general advice and assistance. The author's thanks are also due to Mr. E. Dodwell, Senior Pathological Technician, who prepared and collected the blood samples for biological assay, to Misses Lloyd and Davies, and Mrs. Brueton, Social Service Workers, for their assistance in the collection of data; to those members of the staff who acted as controls for the biological assays; and not least to Miss Martin and her colleagues of the secretarial staff, Whitchurch Hospital,

for their very great help in the preparation of this thesis.

The very great help of my wife in the preparation of this work is gratefully acknowledged.

| | | |
|--|---------------------------------|----|
| Chapter 1. | Introduction | 1 |
| Chapter 2. | History of the subject | 2 |
| Chapter 3. | Basic principles of the subject | 3 |
| Chapter 4. | Practical approach | 4 |
| Chapter 5. | Summary | 5 |
| PART II. ANALYSIS OF MATERIALS | | |
| Chapter 1. | Introduction | 6 |
| Chapter 2. | General material | 7 |
| Chapter 3. | Procedure | 8 |
| PART III. ANALYSIS OF MATERIALS | | |
| Chapter 1. | Introduction and tabulated data | 9 |
| Chapter 2. | Profile studies | 10 |
| Chapter 3. | Discussion of findings | 11 |
| PART IV. ANALYSIS OF MATERIALS | | |
| Chapter 1. | Introduction | 12 |
| Chapter 2. | General material | 13 |
| Chapter 3. | Procedure | 14 |
| Chapter 4. | Discussion of findings | 15 |
| PART V. SUMMARY AND CONCLUSIONS | | |
| Chapter 1. | Introduction | 16 |
| Chapter 2. | General material | 17 |
| Chapter 3. | Procedure | 18 |
| Chapter 4. | Discussion of findings | 19 |

CONTENTS

Introduction

| <u>PART I.</u> | <u>REVIEW OF THE LITERATURE</u> | <u>Page</u> |
|----------------------|---|-------------|
| Chapter 1. | Concept of the Neurodermatoses | 1 |
| " 2. | The Physiological Basis of the Neurodermatoses | 8 |
| " 3. | The Psychosomatic Approach | 26 |
| <u>PART II.</u> | <u>AIMS AND PROCEDURE</u> | |
| Chapter 1. | Aims of the Investigation | 60 |
| " 2. | Case Material | 65 |
| " 3. | Procedure | 67 |
| <u>PART III.</u> | <u>CLINICAL ANALYSIS</u> | |
| Chapter 1. | Introduction and Tabulated data | 71 |
| " 2. | Profile Studies | 73 |
| " 3. | Discussion of findings | 150 |
| <u>PART IV.</u> | <u>ANALYSIS OF TREATMENT</u> | |
| Chapter 1. | Introduction | 169 |
| " 2. | Methods of Treatment | 176 |
| " 3. | Findings | 181 |
| " 4. | Discussion of findings | 185 |
| <u>PART V.</u> | <u>SERUM ASSAY FOR ACETYLCHOLINE</u> | |
| Chapter 1. | Introduction | 201 |
| " 2. | Procedure and findings | 206 |
| " 3. | Discussion of findings | 211 |

INTRODUCTION

This Thesis is a psychiatric study of some 200 patients suffering from psychogenic skin disease.

Much has been written on the neurodermatoses but they are still imperfectly understood, both from a dermatological and a psychiatric viewpoint. Many problems yet remain to be solved. To the clinical psychiatrist the most pressing of these could surely be stated in the following terms. To what extent can psychiatry help these patients, and what is the best way to achieve same. It is with this thought held foremost in mind that this Thesis is written.

The incidence of the psychogenic dermatoses has been computed as amounting to 5% to 40% of all skin diseases. In the face of morbidity of such proportions, lengthy psychotherapeutic procedures would appear of restricted value. Much shorter, less time-consuming techniques of treatment are required.

This Thesis then does not follow any psychodynamic trails but rather attempts to establish a rationale for economic therapy.

The physiological abnormalities which underlie psychogenic skin reactions receive considerable attention in this work. It is the opinion of this writer that before a full understanding of these skin conditions is achieved, the neurophysiological mechanisms by which the emotional disturbances are expressed in the skin must be clarified. In some small way perhaps this work may contribute to a better understanding of the basic mechanisms involved.

PART I.

REVIEW OF THE LITERATURE

- Chapter 1. Concept of the Neurodermatoses**
- Chapter 2. The Physiological Basis of the
 Neurodermatoses**
- Chapter 3. The Psychosomatic Approach**

Chapter I.

The Concept of Neurodermatoses

While the relation between emotional disturbance and skin disease is not fully understood, an association between them is implicit in popular terminology and in historical tradition. One needs but mention such descriptions as 'the blush of shame', 'the pallor of fear', 'red with anger', 'sweating with fright', to appreciate how closely skin reactions are linked with the emotions in ordinary thought and speech. In history, the cure of Scrofula, the King's Evil; the activities of wart-charmers and eczema curers; and the cures reported as following the laying on of hands, all add support to the concept of a psychogenic aetiology in certain skin disorders.

The neurodermatoses as a recognised, or at least disputed, group of entities, may be said to begin with the work of Brocq and Jacquet in 1891. These authors first used the term 'neurodermite' to distinguish a form of skin reaction with strong psychogenic association from the other syndromes classified under the omnibus term of eczema. Vidal, (1896), who described the lichenified form of skin disease still associated with his name; Besnier, (1892), famous for his prurigo; and Czerney, (1905), were other pioneers in this field. From this early work has sprung a host of writings both dermatological and psychiatric.

The early psychiatric work was mainly confined to the production of skin lesions by hypnosis and the cure of established

skin disorders by hypnotic or other suggestive techniques. The production of hypnotically produced vesication, termed by Sack, (1927), the 'Urphaenomen' has been reported by many authors (Sack, 1933; Dunbar, 1936^s). The vesicles produced by such hypnotic suggestion could in most cases be rapidly removed by the same technique. Alrutz, (1915), discussed the phenomenon of 'negative vesication', in which by similar suggestion the anticipated skin reaction to locally applied chemical or mechanical stimuli, could be prevented.

These experiments while strongly suggestive that the psyche could influence the skin met with considerable opposition from the dermatologists. The main criticism was lack of experimental control and the probability that the reactions produced were those of 'dermographia factitia'.

Many authors reported the cure of intractable skin diseases by hypnosis (Dunbar, 1936^s). In many cases these skin conditions could be induced to return by appropriate hypnotic suggestion. Heilig and Hoff, 1928, claimed to influence the course of a virus infection, herpes simplex, by hypnosis. Bonjour, 1924; and 1929, and Bloch, 1927, claimed cures of another virus infection, warts, by simple suggestion.

Parallel with this early work appeared a large number of case reports drawing attention to psychogenic factors of importance in a variety of skin conditions. As early as 1793, Frank discussed possible psychogenic factors in pemphigus, to be followed by Gilbert, twenty years later, in similar vein.

Tillbury Fox, in 1873, described dyshydrotic pompholyx as being of emotional origin and related to blocking of the sweat gland ducts. Hutchinson, 1876, stated cheiropompholyx 'must certainly be regarded as a neurosis'. Duhring, 1885, and Elliot, 1891, discussed emotional factors in dermatitis herpetiformis.

One might go on quoting case reports indefinitely, as they are in truth multitudinous. However, the early psychosomatic case work has been ably reviewed by Sack, 1933; Dunbar, 1936⁸ and 1946; Stokes, Beerman and Ingraham, 1939; and Stokes and Beerman, 1940. The literature they quote strongly supports the concept of a group of skin conditions, of psychogenic origin or potentiation. The 'psychic scotoma' of the dermatologists, of which Sack complained in 1927, was rapidly being dispelled. However to this day it still persists, although to a relatively small extent. MacKenna, 1950, summarised the present position when he described opponents of the psychocutaneous viewpoint as of the opinion that if skin patients show psychological aberrations they do so because of their cutaneous diseases. Sulzberger, 1951, probably the most authoritative proponent of this outlook, phrased this well in his oft quoted analogy of the 'cart being put before the horse'. Unfortunately, as MacKenna pointed out, there is a certain amount of truth in this view, as certainly the effect of Rosacea on a female or acne on an adolescent, is a most emotionally disturbing one. It, however, ignores the large body of clinical reports and experimental work,

which strongly support the psychosomatic basis of certain skin diseases. Stokes, in his numerous papers, has done pioneer work in this field. To him, and later to Wittkower, must go the credit for establishing on a relatively sound basis, our knowledge of the emotional factors in the neurodermatoses.

Despite the doubts of some, the concept of the neurodermatoses was becoming established. There was little doubt that skin changes could be directly produced by psychic influences. Emotional factors appeared of considerable importance in many skin diseases. A number of these skin conditions could be treated by psychogenic means, with relief of symptoms, where only too often all available methods of dermatological therapy had proved unavailing. To many there was adequate evidence to surmise a group of skin conditions of psychogenic aetiology or potentiation, and best treated by the established methods of psychiatry.

Once this basic fact had been accepted controversy raged as to what dermatological syndromes should be included in this group. Numerous case reports were published and it is probably little exaggeration that at one time or another, psychogenic factors have been reported in most of the common dermatological conditions. To restore order from this literary chaos, many attempts at classification were made, (Stern, 1922; Sack, 1927; Eller, 1929; Stokes, 1932). These in the main tried to classify psychogenic skin diseases in terms of their 'neuropsychogenous' factors, with little attempt to delineate basic aetiologies and mechanisms.

Subsequent attempts at classification were made along three main lines, viz:-

(I) According to the degree of psychic association (Lewis, 1947; Brandt, 1950; Sulzberger, 1951).

(II) In terms of the basic personality (Stokes, 1940; Hodgson, 194⁵; MacKenna, 1944; Wittkower, 1946; Sneddon, 1949).

(III) On the basis of disordered physiological function. (Cormia, 1947; Sulzberger, 1948).

Hodgson, 1945, divided psychogenic skin diseases into the frictional and the spontaneous. The lesion which resulted depended on the basic type of skin of the individual, normal, seborrhoeic, ichthyotic, or eczematous. This view, that the basic skin type conditions the form of the skin lesion is supported by many, including Sequeira, 1947; and Sulzberger, 1948.

No method of classification evolved has been satisfactory, mainly in view of the complexity and variety of the factors involved. Cormia, 1947, made this very clear when he described how individual patients followed through the years, might exhibit a wide variety of different dermatoses.

Each classification contains a varying number of dermatoses believed of psychogenic association. One might quote those catalogued by Sulzberger and Baer, 1951, both actively antagonistic of psychosomatic views. They include in one group the self-inflicted dermatoses and glossodynia. Other groups are differentiated on a basis of disordered physiological function.

Among them are pruritic disorders and all phenomena secondary to the associated scratching; disorders of skin sensation and associated lesions; and abnormalities of sweating and related skin changes. Cholinergic urticaria and cholinergic itching are a distinct group. So also is herpes simplex where the attacks are precipitated by emotional disturbances; and verrucae, where cures by suggestion are considered indisputable. These are the dermatoses which the authors have observed to 'respond promptly and unequivocally to the influences of the psyche and the emotions'.

These subgroups do not really represent a rational classification but rather a miscellany of disordered physiological functions, and inferences drawn from the results of psychotherapy. However the relevant dermatoses are quoted here, as Sulzberger and Baer would not consider them psychogenic unless there was an overwhelming body of evidence in support of this view. Many would quarrel with them in that they exclude lichen planus; eczema; lichen simplex; urticaria; atopic dermatitis; alopecia; seborrhoeic disorders; acne vulgaris and Rosacea; and psoriasis. These latter are dermatoses in which the authors, 'despite deliberate and repeated efforts' failed to observe indubitable direct effects of emotional influence.

The neurodermatoses then may be said to range widely over the field of dermatology. Their boundaries with the non-psychogenic dermatological disorders are fluid, expanding and contracting with individual opinion and bias. Few would deny

that conditions such as dermatitis artefacta or acaraphobia were essentially psychogenic. Many would quarrel with this concept of atopic eczema. These conflicting views are discussed elsewhere in this work.

The incidence of these dermatoses commonly accepted as psychogenic also tends to vary with the individual outlook. Klauder, 1936; Rogerson, 1939; Stokes and Beerman, 1940; and Becker and Obermayer, 1947; variously assessed the incidence of the neurodermatoses as around 5% to 15% of all dermatoses. This tends to agree with a similar incidence of 18% in 1948 for the London Hospital (O'Donovan, 1950). Wittkower and Russell, 1953, computed a figure of 16% for the patients attending St. Johns Hospital for Diseases of the Skin in 1949, their cases being assessed on the classification of neurodermatoses by Becker and Obermayer, 1947. They suggested it would be reasonable to assume that emotional factors were of significant aetiological importance in between 25% and 50% of all skin diseases. The proportions of such morbidity can best be understood from an occupational point of view. They acquire disturbing immensity when assessed against the fact that in 1943, in the State of Ohio, over 32,000 days work were lost due to skin disorders.

Chapter 2

The Physiological Basis of the Neurodermatoses

In the foregoing chapter has been described work which tends to support a concept of a group of psychogenic skin diseases. In this section the physiological reactions which underlie such skin manifestations are briefly discussed.

These basic physiological mechanisms can be considered in four main groups:-

- (i) Cutaneous vascular physiology.
- (ii) Sweat gland secretion.
- (iii) Seborrhoeic gland secretion.
- (iv) Itching.

These divisions are not clear cut and they are often intermingled in individual neurodermatoses.

For the purposes of this thesis attention is principally confined to those dermatoses which are investigated in the clinical section of this work.

Cutaneous Vascular Physiology

This has received considerable attention in relation to principally, Rosacea, urticaria, and atopic eczema.

The basic importance in Rosacea of localised vasodilatation in the blush area of the face has been emphasised by, among others, notably Klaber and Wittkower, 1939; Sequeira, 1947; Cormia, 1947; and Hodgson, 1950. The reason for this persistent vasodilatation is uncertain, but may be related to a general tendency to poor vasomotor control. (Whitwell, 1934; Hodgson, 1950.) A relationship to histamine is suggested by

the observation of Klaber and Wittkower that in Rosacea patients the main preponderance of the flush from injected histamine falls in the facial area. They suggested this indicated a lowered capillary tonus in this area and consequent greater readiness to vasodilatation. The association of Rosacea with blushing or flushing has been noted by many writers. Klaber and Wittkower found an incidence of 66% in their series as compared with 34% in a control group. Cormia, 1951, found a labile blush mechanism in eight out of nine of the cases studied by him. Flushing from cardiac or pulmonary disease, or the menopause, is described as associated with the onset of Rosacea by Klaber and Wittkower; Sequeira; Sulzberger, 1948; and Hodgson. Reflex blushing from disturbed gastric motility secondary to disordered hydrochloric acid secretion, is discussed as a factor in Rosacea by Whitwell, 1934; and Eastwood, 1934. They point out there is no evidence of a consistent abnormality of gastric secretion in Rosacea, adequate to support the above theory. This accords with the clinical findings of Klaber and Wittkower, and Soby, 1950, that dyspepsia and dietetic indiscretions were unimportant factors in Rosacea. However, the former authors conceded that a diminution in gastric motility secondary to emotional disturbance, might by reflexly inducing blushing, be of aetiological importance. Stokes, 1932, considered the effect of disturbed gastric function was to liberate acetylcholine, the latter being responsible for the Rosaceous flush. Again, Wolff and Mittelman, 1939, claimed to have observed gastroscopically the simultaneous clearing of gastritis and Rosacea.

Sulzberger and Zaidens, 1948 accept the importance of the emotional flush reaction in Rosacea and consider that chronic facial vascular dilatation might occur where there was an intrinsic weakness or predisposition, or added circulating poisons or infection. They also point out the relevant fact that the majority of precipitating or aggravating factors in Rosacea are extraneous vasodilators. Pregnancy and menstruation may also aggravate Rosacea, and emotional factors are generally accepted as of major importance, mainly in relation to the vasomotor instability.

Pathological studies in Rosacea as described by Sequeira and by Hodgson are uninformative of the vascular abnormalities. Soby, in 75 skin biopsies, found no characteristic diagnostic changes. He also studied the capillary resistance of the facial vessels in the Rosacea group and found no significant difference as compared with a control group. He postulated that Rosacea was essentially due to damage to the small facial vessels by the common precipitants of the condition. As Rosacea tended to affect the more muscularly quiescent areas of the face, exudate from these damaged vessels could remain locally as oedema with consequent disturbance of nutrition which produced the typical skin changes in Rosacea.

A consideration of the neurovascular studies in urticaria is confusing, as the literature is vast, and the basic mechanisms imperfectly understood. The physiological basis of the reaction is generally accepted as being due to the release of a histamine-

like substance in the skin, causing capillary dilatation, and increased permeability and by a local axon-reflex, arteriolar dilatation. These vascular changes favour exudation and wheal formation and if the deeper subcuticular layers are involved, produce giant urticaria or angioneurotic oedema. (Sequeira; Roxburgh, 1947; Owen, 1950). The precipitants of urticarial attacks can broadly speaking be classified as allergic substances, mechanical factors, and emotional disturbance. Of these, only the last named group properly concern this thesis. Most authors confine this group to chronic or relapsing urticaria and accept the implication of emotional factors. (Sequeira; Owen; Stokes and Beerman, 1940; Rothman and Walker, 1951). However, the mechanisms by which this reaction is produced is obscure and the histamine release appears based on a mechanism other than the antigen-antibody one.

Sequeira suggests a stress suprarenal dysfunction as at fault, and it is relevant to this point that Rose and Brown, 1938, showed the histamine content of the skin was increased 200 times by adrenalectomy. Owen postulates an increased sensitivity of the skin vessels to histamine-like or choline-like substances, normally produced in the skin. He then suggests an emotionally determined urticaria may be due to an indirect stimulation of cholinergic nerve fibres. Thus he links emotional urticaria with cholinergic urticaria. This latter group, first described by Grant, 1936, is now generally accepted as a discrete entity in which the urticaria is produced by the release of acetylcholine into the skin by stimulation of cholinergic nerve

fibres. The original work has been confirmed by Hopkins, 1938, and is supported by the clinical reports of Sigel, 1948; and Loewenthal, 1949. The precipitants for cholinergic urticaria are usually described as heat, exertion, excitement, and emotion. Thus cholinergic urticaria forms a link between physical and emotional urticaria. Abramson, 1941, reported an urticaria response to cold the onset of which followed emotional trauma. The clinical symptoms and positive test reactions disappeared with resolution of the psychic conflicts.

The temptation to link psychogenic urticaria to cholinergic urticaria is strongly resisted by Rothman and Walker. Their main argument is that patients with psychogenic urticaria are not sensitive to heat or acetylcholine. This, of course, ignores the emotional precipitants already reported in cholinergic urticaria. Their argument becomes even less sound when they postulate a different mechanism for mechanical urticaria and that induced by excitement or emotion, when they have been variously reported as co-existing in the same individual. However, they accept that in 'excitement urticaria' acetylcholine is released in the skin. They suggest the evidence is inadequate to support a theory of increased acetylcholine release or production at the cholinergic nerve endings, but favour an abnormal reaction of the skin to normal cholinergic activity so that arteriolar dilatation is produced more readily. By an antigen-antibody reaction with acetylcholine, histamine is liberated which produces increased capillary permeability and whealing. This links up with the work of Brunner, 1948, who

discussed the liberation of acetylcholine at the cholinergic nerve endings as part of the cutaneous changes in emotion. He suggested that by a synergistic effect of acetylcholine with histamine produced from a local antigen-antibody reaction, an urticarial reaction would be obtained when the histamine alone would have been inadequate. Thus he explains the clinical observations that emotional disturbance may lower the threshold for cutaneous allergic reactions. This again may link up with the accepted effect of fatigue, psychic strain, or lowered bodily resistance in reducing the threshold to whealing, possibly by adrenal depletion, (Lancet, 1953). Other work in support of an association between acetylcholine and histamine in whealing reactions is that of Rothman and Coon, 1940, and Deutsch and Nadell, 1942.

Graham and Wolff, 1950, contest the view that histamine is an essential agent in the production of urticarial wheals. Most authorities accept that acetylcholine will produce only arteriolar dilatation and that as the wheal reaction is dependent on capillary dilatation and increased permeability, histamine is essential to produce this latter effect. Graham and Wolff point out that the mechanical consequence of dilatation of arterioles is passive dilatation of capillaries. They quote Ponder, 1949, that a dilated capillary is, ipso facto, a more permeable one. Thus a wheal reaction can be produced without the intervention of histamine. This view is cogently criticised by Sulzberger and Baer, 1950, in that the injection of arteriole vaso-dilators such as nicotinic acid never produce whealing. One might support

Graham and Wolff by noting that anti-histamine drugs have little effect in cholinergic urticaria, (Lancet, 1953); and the beneficial effects reported by Grant, Hopkins, Graham and Wolf, and Owen, from the administration of atropine in cholinergic and emotional urticaria. This tends to indicate the relative unimportance of histamine in these states.

Little is known of the neurovascular reactions operative in atopic dermatitis. The work of Williams, 1938, suggests a difference in vascular reactivity at the sites of predilection for this condition. Intramuscular injection of histamine produced a rise of temperature at these sites in atopic eczema subjects as distinct from limitation of the reactions to the face and neck in controls. Eyster, 1952, found greater peripheral vasoconstriction in atopics and a hyper-reactivity to the cold pressor test indicative of probable increased vascular reactivity. These findings would make understandable the wide variety of precipitants for atopic dermatitis in their common ability to produce vaso-constriction of the susceptible cutaneous vessels. It also helps to explain the phenomenon of 'white dermographism' in atopics, and the similar absence of the 'flare' in such patients in the response to intradermal histamine in dosage adequate to produce a full triple response in normal controls. Sulzberger and Baer, 1952, agree with the greater tendency to vasoconstriction of atopics and consider the multiple precipitant factors of this condition, including allergens and stress, merely precipitate this vasoconstriction. However, against this view, is the report of Norrlind, 1946,

that the whealing response to injected histamine was similar in atopsics and controls. Rothman and Walker, 1951, also disagree and consider both white and red dermographic responses are common in normal skin. They do not indicate general autonomic unbalance but rather a difference in local reactivity of the small blood vessels.

This seems a somewhat sweeping criticism of careful experimental findings, but the protagonists of the 'vaso-constriction' theory do not really put up a very good case. Among other things, they do not explain the characteristic distribution of the rash in atopic eczema. It seems unfortunate that the earlier works of Williams was not followed up, to further test the local vascular reactions in these sites of predilection.

Sweat Gland Secretion

Much work has been carried out on the physiology of the sweat glands. From the viewpoint of this thesis interest will be restricted to emotional sweating which according to Kuno, 1934, is confined to the eccrine glands of the palms, planter areas, and axillae. He carefully distinguishes it from thermal sweating which affects the rest of the body and is controlled by the temperature-regulating centre in the brain. The central control for emotional sweating is unknown, but Chalmers and Keele, 1952, suggest it is a cortical function. The distinction between thermal and emotional sweating is confirmed by Herrmann and co-workers, 1952, but it is of interest that in some cases they could elicit profuse palmer sweating by thermogenic

stimuli.

The innervation of the sweat glands is anatomically from the sympathetic nervous system, but functionally they act as if cholinergic reactors. They are stimulated by acetylcholine and inhibited by atropine. The stimulation of sweat secretion by acetylcholine introduced into the skin by intradermal injection or ion-tophoresis is reported by various authors, including Gibson, 1948; and Shelley, 1951.

The possibility of an adrenergic component in the nervous mechanism of human eccrine sweat glands has recently been investigated. In essential the experimental findings consisted of the induction of sweating by intravenous injection of sympatheticomimetic drugs and the blocking of this effect by adrenergic blocking agents. (Haimovici, 1948; Kisin, 1949; Sonnenschein, 1949; and Wada, 1950). The same inhibiting effect could not be produced by cholinergic-blocking agents, confirming that the observed sudorific reaction was not due to released acetylcholine (Sonnenschein). However, Sonnenschein, 1951, and Chalmers and Keele, 1951, demonstrated that preliminary injection of adrenaline antagonists did not prevent the development of thermal or emotional sweating. Preliminary injection of atropine, on the other hand, completely abolished this sweat response. The conclusion was reached that while sweat glands can be locally excited by adrenergic agents, there is no evidence that adrenergic nerves play any part in the nervous control of sweating. Haimovici, 1950, however suggested

a synergic effect of cholinergic and adrenergic agents on sudomotor function.

The sudorific reaction to stress situations or in relation to emotional disturbance, has been reported by many authors, including Van de Erve and Becker, 1935; Van der Valk and Groen, 1950; Kepecs, 1951; Chalmers and Keele, 1951; and Seitz, 1952. A positive correlation between stress or emotional disturbance and palmar sweating is reported by all. The predominant associated emotion in most case was anxiety. It is of interest that Silverman and Powell, 1944, found that of 1100 general hospital patients tested, 25% showed an intense palmar sudorific response associated with emotional stress.

The techniques employed to measure the sudorific response include the counting of the number and size of functioning sweat glands, (Randall, 1946); the absorption of sweat on weighed filter papers, and reweighing, (Kepecs, 1951); or the use of the psycho-galvanic reflex. The latter undoubtedly measures functional changes in the sweat glands, and therefore in the areas for emotional sweating should be an assessment of emotional disturbance. It seems unfortunate that a more reliable test of this kind has not yet been envolved for general use.

Chalmers and Keele, 1949, investigated the phenomenon of essential hyperhidrosis on the theory that this might be due to a local sensitivity of the hyperactive sweat glands to acetylcholine. Testing of hyperhydrosis subjects and controls by intradermal injection of acetylcholine revealed no significant

differences in the sweat gland response as measured by the electrical resistance of the skin and a count of the number of active glands. They concluded that essential hyperhidrosis was not due to a local sensitivity to acetylcholine but more probably to excessive stimulation of the sweat glands by nervous pathways. It is interesting and relevant to this point that they could not produce palmar sweating by intravenous injection of acetylcholine or methacholine despite the induction of salivation and flushing.

Considerably greater interest has been paid to the possible association of emotional sweating with dyshidrotic eczema or cheiropompholyx, commonly accepted as a neurodermatosis. A certain amount of controversy rages on this point, but the commonly accepted view is that dyshidrotic pompholyx is a condition derived from the phenomenon of sweat retention. Its occurrence in relation to the areas of emotional sweating then links it up as a stress reaction. The evidence in favour of same is mainly based on the work on tropical miliaria and anhidrosis, of Allen and O'Brien, 1944; and O'Brien, 1947.

In temperate climates, this syndrome of sweat retention is postulated as the main aetiological factor in hand eczemas, particularly dyshidrotic eczema, and other pruritic disorders in the sweat gland areas. This concept is most competently reviewed by Sulzberger and Baer, 1948. They agree that the cause of the sweat duct blockage is uncertain but suggest soaking in water, or the equivalent effect of persistent or intermittent hyperhidrosis might play a part. By imbibition of this fluid,

swelling of the horny or subjacent layers would occur, with partial or complete blockage of the sweat ducts by compression. Again, in an intermittent hyperhidrosis, the sweat gland ostia might not be able to deal with large quantities of sporadically secreted sweat. In either case the sweat ruptures into the tissues forming the characteristic vesicular eruption. The fact that hyperhidrosis and dyshydrotic eczema are not invariably associated is carefully considered by Sulzberger and Baer. They suggest a number of local factors may also play a part, the principal effects of which are to produce sweat gland duct blockage. Once this is established, a number of triggers may fire off a dyshydrotic reaction, including emotional hyperhidrosis.

Further evidence in favour of this theory is that Kuno, 1938, established that prolonged soaking of the skin as in persistent hyperhidrosis, by removing the protective layer of sebum, facilitated imbibition. However, Hermann, 1952, described increased sebum production associated with emotional sweating. Shelley, 1950, experimentally produced duct obstruction and sweat retention vesicles by exposing the skin to minor trauma of various kinds, including fluid maceration. Lobitz, 1952, demonstrated evidence of sweat retention as an aetiological factor in many common dermatoses. In each case, due to skin trauma, blocking of the sweat gland duct or its orifice occurred. Goldman, 1941, induced the dyshydrotic eruption in susceptible psychoneurotic patients, by injection of a cholinergic drug.

Clinically, the relation between emotional hyperhidrosis and dyshydrotic pompholyx was noted as far back as 1873, by Tillbury Fox. He then attributed the reaction to sweat gland blockage. Subsequent clinical reports, as will be described elsewhere, show a similar relationship.

The case for dyshydrotic eczema or pompholyx as a sweat retention phenomenon appears a good one. However, it is contested by some. Sequeira, 1947, claims the pompholyx vesicles are not histologically related to the sweat ducts and so the condition is not due to dyshydrosis. This disagrees with much of the former work already reported. Perhaps the problem is best answered by the work of Whimster, who observed a histological continuity between pompholyx vesicles and the lumen of the sweat ducts in some cases, but not in others. He therefore concluded there were two types of pompholyx, dyshydrotic and eczematous.

The common phenomenon of secondary infection such as dermatophytosis occurring on a basis of emotional hyperhidrosis is reported by several authors, including Sulzberger and Zaidens, 1948. Perhaps the explanation lies in the views of Loewenthal, 1950, who suggests that excessive sweating neutralises the protective fatty acids normally present in sebum and skin and so encourages bacterial growth.

Seborrhoeic dysfunctions

The sebaceous glands and abnormalities of their function are most important in relation to seborrhoeic dermatitis, acne vulgaris and possibly Rosacea (Hodgson, 1950). The basis of

this abnormal seborrhoeic response is imperfectly understood, but usually considered secondary to endocrinal disturbance. A disturbance of the androgen and oestrogen ratio appears the vital factor, (Sequeira, 1947; Barber, 1948; Hodgson, 1950; Bettley, 1950). Other factors are probably also implicated, and prominent among these are psychic influences. However, it is not clear exactly how the psyche can affect the sebaceous glands, as no nerve supply to them has yet been demonstrated. Wittkower and Russell, 1953, suggest this influence may be indirect by the endocrine glands but Sequeira considers sebaceous secretion is entirely dependent on local vascular supply. The occurrence of seborrhoeic dysfunction in relation to mid-brain or pontine lesions, argues to some the probability of a nervous control of seborrhoeic function, although possibly acting indirectly on the glands, (Krestin, 1927; Wittkower and Russell). However, Montagna and Kenyon, 1949, proved that the flow of sebum from gland and duct was not directly controlled by the autonomic nervous system. Again, it has been experimentally shown that the sebaceous glands increase in size and activity with androgen stimulation, (Ebling, 1948; Diehe, 1948; Montagna and Hamilton, 1949). Sequeira states that seborrhoeic skins are often associated with hyperhidrosis or vasomotor instability. This may be the manner in which psychic influences can affect sebaceous function. Sebum production and sweating certainly appear related, but probably in so far as the sweat emulsifies and removes the sebum, (Herrman, 1952). Thus recent attempts to correlate sebaceous secretion with experimentally induced emotional states have met with criticism in that the complicating

effect of emotional sweating had not been considered. Kepecs, (1951), who purported to find such a correlation, used a technique for measurement of sebaceous activity which lays itself open to this criticism. So also did Wolff et al., (1951), in their work on the seborrhoeic reaction to stress of acne vulgaris patients. Their findings do tend to bear out an emotional association, anger tending to increase sebum production and remorse to diminish it.

Disturbance of sebaceous secretion appears to predispose to organismal infection or render the skin more susceptible to irritants. This is presumably the reason for the frequency of seborrhoeic eczema. Wittkower and Russell suggest there is an inherited tendency in some to seborrhoeic eruptions. On this basis, many factors including emotional stress, may light up a seborrhoeic dermatitis. They suggest the fault in the sebum is 'qualitative rather than quantitative', in contrast to the changes found in acne vulgaris.

The aetiology and relation to stress of the seborrhoeic dermatoses is obviously a complex one. The endocrine abnormality does seem a basic factor and in connection with this point must be mentioned the findings of Quiroga, 1950, that the 17 ketosteroids in the urine of juvenile acne patients was greatly increased as compared with a control group. However, the results of endocrine administration in the treatment of seborrhoeic states are very variable, and suggest that a full understanding of aetiological mechanisms has not yet been achieved.

Rosacea is often described as one of the seborrhoeic dermatoses. This is possibly an incorrect description as while

seborrhoea may be associated with Rosacea, it appears to be of relatively little aetiological importance. Klaber and Wittkower, in their very careful study of Rosacea, considered seborrhoea a late secondary manifestation, present to only a minor extent. This view was put somewhat more precisely by Soby, who found in a large series of Rosacea patients, that 20% had slight seborrhoea and only 4.6% marked seborrhoea. Corresponding figures for controls were 11.8% and 0.4%. These findings tend to support the view that the seborrhoea of Rosacea is of relatively little importance from the view point of the aetiology of that condition.

Pruritic dysfunction

The mechanism of itching has for long been a subject of considerable interest to physiologically minded dermatologists. The early work on the neurophysiology of pruritus associated same with localised disturbance of blood flow, (Desaux, 1936). Brack, 1935, while in agreement with this view, suggested psychogenic pruritus was due to a lowering of the itch threshold, which occurred in the absence of any of the usual causes for itching. Goldsmith, 1934, considered that pruritus was essentially derived from peripheral sensations of pain and touch. In psychogenic pruritus, the slight itching present in normal skins but unnoticed, was closely attended to. Thus it was not the peripheral sensations that were altered, but rather the attention factor that was intensified. The implication of the nerve endings for pain in the mechanism of itching, was confirmed by Kennedy, 1937, and Bickford, 193⁸₇. Graham, 1951, made a distinction between

itch arising from the pruritic skin, and 'tickle' sensations from surrounding areas. They considered tickling, itching, and burning sensations were all modified pain sensations, dependent upon the intensity of stimulus applied. Other workers who agreed with this view of itching were Rothman, 1941; Bishop, 1948; and Rothman and Walker, 1951. Potelunas, 1948, disagreed that itching and superficial pain were closely related as this could not be verified experimentally. Histamine is well known as a pruritic agent, and Loewenthal, 1949, suggested that acetylcholine might also be involved. Others called attention to the intense pruritus noticed in the sweat retention syndromes described earlier. Thus idiopathic pruritus might be due to sweat retention of a degree inadequate to cause a vesicular eruption. Wittkower and Russell pointed out the centrally derived itching, independent of peripheral stimulation, which can occur in certain organic nervous diseases and in some forms of psychogenic pruritus. They suggested psychic irritation could project itself on the skin with resistant pruritus. To some extent this agrees with the view of Miliam, 1936, that psychogenic itching was not of peripheral origin but centrally produced in the sympathetic centres of the brain stem. Rothman and Walker, 1951, accept that emotional disturbance can aggravate a pre-existent inflammatory reaction. They consider this effect is achieved by a local antidromic skin vasodilatation, the resultant hyperaemia diminishing the itch threshold. Cormia, 1952, found that the itch threshold in experimentally induced histamine pruritus could be significantly lowered in neuro-dermatitis patients by exposure to emotionally charged

situations. Their itch threshold in uninvolved skin areas was similar to that of the normal control group, but itching lasted twice as long. The itch threshold was very low in areas of idiopathic pruritus and lichenification. Testing at night produced a hundred fold reduction in this threshold as compared with the day. Of considerable interest was the fact that following subsequent psychic trauma, the itch tended to recur in areas previously tested with histamine. Acetylcholine, (Mecholyl), was investigated as a pruritic agent to ascertain if by its synergic action with histamine it might play a part in idiopathic pruritus. The results of testing did not support this view.

Chapter 3

The Psychosomatic Approach

By virtue of an outlook implicit in its terminology, the psychosomatic approach to the neurodermatoses is essentially a complex one. It implies a monistic view of the problem and a rejection of an attitude of dualism of mind and body. This concept tends to be appreciated more in theory than in practice. Too often psychiatrists and dermatologists appear to work as if in mutually exclusive compartments.

A number of workers can be absolved from this indictment, notably Stokes and Cormia, among the dermatologists, and Kepecs, Seitz and Graham of the psychiatrists. These workers are singled out for mention not because of their findings, but rather because of their originality of outlook and their attempt to understand and validate essential psychosomatic problems. Their work may be subject to criticism, but certainly not on the score of an honest attempt to understand basic problems.

The psychosomatic view of the neurodermatoses then ranges from the generalisations of the dermatologists to the obscure interpretations of the more profound psychoanalysts. The dermatologist tends to consider the psychogenic factors in terms of anxiety, tension, or similar general emotional states; the psychoanalyst as indicative of deep psychological maladjustments, expressing themselves through the skin. The analyst has this in his favour, that he does attempt to establish a rational basis for his view of the neurodermatoses. Sack, 1927, described the skin as an organ of expression by which deep unconscious conflicts

achieved symbolic expression. The skin could also be used for purposes of exhibitionism or by means of its rich sensory innervation to satisfy deep sensual drives. It is the physical boundary between the individual and the environment and as such plays a major part in the mechanism of unconscious expression. The views of Sack are to this day held as valid and form the foundation on which are erected most of the accepted psychodynamic concepts on the aetiology of the neurodermatoses. Thus the skin could be used to express self-punishment, self-love, self-aggrandisement, and a variety of similar psychopathological mechanisms, (Zaidens, 1948). Wittkower, 1948, described the neurodermatoses as expressing certain unconscious conflicts which centred around focal points related to skin function. The principal foci for conflicts were self-esteem, sexuality, aggressiveness, and cleanliness. These unconscious conflicts when activated by a current situation express themselves in specific physiological skin reactions. Thus particular unconscious conflicts tend to be associated with specific neurodermatoses. The underlying conflict can be deduced from the type of neurodermatosis and its localisation, the latter being symbolically determined.

Wittkower makes much of this 'body language'. Thus the 'blush of guilt' or the 'flush of anger' makes Rosacea intelligible in terms of suppressed guilt, hostility, or anger. An exudative lesion represents suppressed weeping, usually related to the loss of a parent figure. Scratching symbolises repressed aggression, where the normal outlet is denied and the

emotion is vented on the self. It may also express pure destructive or masochistic tendencies, or become eroticised and represent a disguised masturbation. Itching is usually given a sexual significance.

The localisation of the lesion is variously interpreted according to the site. A disfiguring lesion on the face may be expiating of repressed guilt; be a form of self-punishment; or expressive of a feeling of uncleanness due to repressed guilt. On the hands it signifies the patient's desire to 'throw in their hand' and retire from the conflict. Again it may signify repressed guilt, as in Shakespeare's Lady Macbeth. On the legs, the lesion indicates a desire not to move in a particular direction. Anal and vulval sites have obvious sexual connotations.

These views are fairly representative of analytical interpretations of the neurodermatoses. Miller, in a review of the psychodynamic literature in 1948, quoted sexual maladjustment, repressed hatred, fear, and guilt towards a cruel parent, frustrated love-longings, and masochistic trends, as the main psychopathological features in psychogenic skin disease.

The literature is confusing, and it may be that a number of authors overreach themselves in their interpretations of cases. Too many make rash generalisations on the results of single case studies. Franz Alexander, 1952, has pointed out this fault and also the error of failing to distinguish between a conversion hysteria expressing itself in a somatic lesion and a visceral neurosis, the physiological disturbance accompanying an ^affective state, repressed or overt. The former has a psychological

meaning which can be deduced; the latter no meaning at all, unless specific physiological reactions can be correlated with particular emotional states. This, as yet, cannot be done. Thus recent analytical views on the neurodermatoses have tended to be more moderate. McAlpine, 1951, expresses this when she suggests that most cases of neurodermatitis represent an 'affective equivalent'. For some reason, a simple affective reaction cannot discharge itself through conscious channels or is produced in excess too great to be dispelled. Thus the emotion becomes dammed-up and its associated physiological changes condition the cutaneous lesion. Other psychosomatic writers prefer to consider their cases in terms of 'life situations', and the lesion as a reaction to situational stress in a personality unable to tolerate same. This in no way conflicts with moderate analytical views, as the unconscious factors are fundamental in conditioning the personality susceptibility to stress.

Attempts to experimentally validate analytical hypotheses have recently been carried out. Kepecs and co-workers, 1951, raised cantharides blisters on the skin and measured the alterations in exudation from the cut surface when the patient was taken over analytical situations under hypnosis. They attempted to show that exudation was associated with suppressed weeping, but failed to do so. However, their experiments clearly showed a relation between emotional disturbance and exudation into the skin. Seitz, 1949, claimed to be able by hypnotic suggestion to substitute a neurodermatosis for a

non-dermatological psychosomatic symptom with a similar psychopathological basis. Other neurodermatoses whose commonly accepted psychopathology varied from that of the original psychosomatic condition could not be substituted for it, although they could be hypnotically induced along with same. Deutsch, 1950 and 1952, attempted to correlate vasomotor changes as measured by plethysmographic recordings, with specific emotional situations. His findings were inconclusive. Graham and Wolff, 1950, demonstrated by correlating cutaneous vascular studies with the emotional state, that the skin reaction in urticaria was of the nature of 'taking a blow or a beating' and occurred in situations of helpless resentment.

Personality studies in psychogenic skin disease have been a focus of considerable interest and a source of many publications (Stokes, 1940; MacKenna, 1944; Sneddon, 1949). Most psychiatric reports on the neurodermatoses describe the personality features associated with the syndromes under consideration. A number of writers have supplemented their clinical observations with projection testing of personality or conducted independent Rorschach investigations on neurodermatitis patients, (Lynch, 1945; Obermayer, 1952; Levy, 1952). These views on personality are best discussed in relation to individual syndromes or projection testing. Sufficient to say at this point, that the attempt to correlate specific personality constellations with individual skin reactions has proved unavailing. MacKenna, who in 1944 distinguished five personality groupings related to associated dermatoses, in 1952 denied any

such personality associations. Franz Alexander expressed a similar opinion in his statement that 'a mysterious and vague correlation between personality and disease does not exist'. One might exempt from this injunction, the work of Rogerson on the personality of the allergic child. His description of the personalities of such children has become a classic, and amply substantiated by the work of later investigators. One must also allow that certain features of personality do appear to be associated more with specific syndromes than others. What cannot be accepted is a rigid distinction of personalities, each with its associated group of skin disorders. Cormia, 1947, makes this very clear in his study of a number of patients over a prolonged period, each of whom developed a series of differing neuro-dermatoses during the period of observation. Later studies are also in agreement with this view.

Individual skin syndromes will now be briefly described in relation to their aetiological factors of psychosomatic importance. The skin disorders discussed below are restricted to those which form the case material for this investigation.

Rosacea

The importance of emotional factors in the aetiology or potentiation of Rosacea is commonly accepted. Some few workers disagree, among them Sobyte, 1950, who in his large series of cases, claimed to find no evidence of psychological factors of aetiological value. The emotional disturbance and social anxiety he observed were he claimed, secondary to the disfiguring

lesion. Sulzberger, 1948, grudgingly accepts the importance of emotional factors, but his contribution to a better understanding of their effect is to state that Rosacea tends to be superimposed 'on a personality which not infrequently solves life situations by alcohol or drugs'.

Unfortunately, psychosomatic studies of Rosacea are very few in number (Stokes, 1932; Klaber and Wittkower, 1939; Cormia, 1951). All stress the importance of social anxiety as a chronic stress factor. Stokes considered prolonged slow-acting stress and anxiety was the main cause of Rosacea. Hodgson, 1950, expressed a rather similar view, that excessive fatigue and psychic exhaustion often masked by over-activity, was of fundamental importance. Klaber and Wittkower found that most of their patients related the exacerbations of Rosacea principally to worry. Cormia found a similar relationship to anxiety in his series of cases. Acute or chronic stress factors, adequate to be considered as precipitants, antedated the onset of Rosacea in 33 of Wittkower's 50 cases, and in most of Cormia's small series. These factors divided themselves into problems of social contact or of sexuality, (Wittkower); or problems relating to work, family, or social relationships. (Cormia).

Cormia could not confirm the importance of sexual problems. Feelings of guilt and shame were infrequently present and were related mainly to economic or environmental considerations.

Klaber, 1947, considered the Rosacea patient as preoccupied with feelings of guilt and shame, usually sexual. The se,by inducing persistent blushing, precipitated the skin condition.

He however agreed with MacKenna, 1944, on the basic importance of chronic anxiety in the Rosacea personality structure.

Wittkower, 1939, and 1953, expressed views similar to Klaber above. He considered the outstanding characteristic of Rosacea patients was an abnormally high level of self-esteem, constantly threatened by commonplace events. Precipitant stresses were life situations which led to the activation of feelings of guilt and shame. The patients exhibited an abnormal degree of social anxiety related to these feelings and to their conscious inferiority. He stressed the aetiological importance of blushing in Rosacea, and pointed out the close association of sexual guilt with this physiological reaction. Thus repressed sexual conflicts and their emotional counterparts of shame and guilt, by inducing blushing were believed to play an important part in the aetiology of Rosacea.

Unfortunately, there are no deep analytical studies on Rosacea to support Wittkower's views. His psychodynamic interpretation of blushing agrees with that of Flugel, 1930. He also quotes analytical views on erythrophobia to support his case, in the belief that erythrophobia is commonly associated with Rosacea. One might criticise Wittkower in that the psychodynamics he describes are not those of Rosacea, but of blushing and erythrophobia. Only in so far as these latter factors are causal in Rosacea, can his interpretation of this condition be accepted.

Urticaria

As has been already noted, the psychosomatic literature on this subject is indeed vast. It is a field in which allergists,

dermatologists, and psychiatrists all claim major rights. Much controversy exists and it is probably only in relation to chronic or relapsing urticaria, and possibly cholinergic urticaria, that the due importance of emotional factors is conceded. It is therefore of relevant interest that Stokes, 1935, in a study of 100 cases of chronic urticaria, showed that emotional factors were partially responsible for the urticaria in 83% and solely responsible in 12%.

The early work on emotional factors has been well reviewed by a number of authors (Stokes, 1935, Stokes and Beerman, 1940; Saul, 1941; Dunbar, 1946; Weiss, 1949; and Wittkower, 1953). An excellent general survey appears in the Lancet, 1953. Much of this early work was concerned with case reports of urticaria initially induced by emotional trauma with recurrences in situations where these emotionally toned memories were revived. (Stern, 1922; Klauder, 1925; Mohr, 1925; Sack, 1929). Many such cases were treated and relieved by psychotherapy.

The emotional states related to attacks of urticaria were described as annoyance or anger, (Kreibich, 1926; Naber, 1929); fear, (Hansen, 1930); tension (Stokes, 1935); excitement, (Stokes and Beerman, 1940); and anxiety (Davis, 1941, Klaber, 1947). Feelings of helpless, ineffectual, resentment were described by Graham and Wolff, 1950, as predominant in their series of cases. The Lancet review describes cholinergic urticaria as occurring in persons who react to danger passively, in the same way as to regional assault. This latter of course accords with Graham and Wolff's findings that the neuromuscular

response in their patients was as if they were 'taking a beating'. The review describes this regional type of reaction as being sustained by frustration of love, anger or fear and their conversion into longing, hate and passivity. Events which recalled associated emotional traumata in the past, could precipitate attacks. Thus an apparent antigenic substance might achieve its effect solely by revival of such emotionally toned 'memories'.

Urticaria as a manifestation of sexual tension and conflict is illustrated by attacks at time of coitus, (Stokes and Beerman). Anxiety, in its appropriate setting, was described as an important precipitant factor by Davis, 1946; Kaywin, 1947; and Klaber, 1947. Stokes, 1935, considered the important factor in psychogenic urticaria was the personality type, in which tension and chronic anxiety figured prominently. The attacks were precipitated by the impact of environmental difficulties on this susceptible personality. Cormia, 1951, described recent psychic trauma as associated with all attacks of urticaria in a small series of patients observed by him. The related emotional background for these traumatic precipitants was anger, hostility and resentment, in some cases directed against parent figures. The majority of these patients revealed prolonged adult conflicts associated invariably with feelings of hostility and resentment. Sontag, 1950, also related urticaria to repressed hostility, while Weiss and English, 1943, suggested it was a symbolic representation of suppressed fear and anger, with the urticaria 'bursting the bonds of restraint'. It is of relevant interest that Cormia, 1947,

reported cases where an urticarial reaction was superimposed upon or replaced an existent neurodermatitis, in response to a severe fear-provoking situation or the development of strong feelings of hostility or anger. An unusual case of spontaneous urticaria is described by Dunbar, 1939, in which the skin condition achieved a compromise solution of the conflict of the patient to satisfy and retain her sexual partner while yet avoiding his sadistic beatings.

Saul and Bernstein, 1941, express a more psychodynamic view in their studies of three cases of urticaria. All revealed frustrated longings for love and in two cases, strong masochistic attachment to the father. The attacks of urticaria were precipitated by situations which led to the frustration of their suppressed love longings. Saul suggested that the latter when especially intensified, frustrated, or threatened with frustration, might increase individual allergic sensitivity. He postulated a specific reciprocal relationship between suppressed weeping and urticaria. This was based on observation of a patient whose urticarial attacks terminated with weeping and who did not have urticaria when she wept. It was supported by unconvincing clinical experiments on another patient. However, Alexander, 1952, agreed that his studied cases of urticaria revealed a similar specific correlation with suppressed weeping. He linked urticaria with asthma as based on inhibited dependent longings for a parental object.

Wittkower, 1953, largely agreed with the above view of the psychodynamic mechanisms in urticaria. He found the common factor

in his series of 35 cases was an inability to tolerate denial of love and a tendency to react angrily to such situations, with in many cases the urticarial eruption being the disguised expression of this anger. The precipitating situations for an attack were where actual or anticipated withdrawal of love occurred or was feared. The personality structure of these patients revealed the anticipated suppressed intense need for affection, to which they reacted by a childhood and adult behaviour pattern either predominantly passive and dependent, or aggressive, hostile and resentful. Wittkower was somewhat critical of the association of suppressed weeping and the urticarial eruption. He preferred to consider the wheals as symbolising the skin manifestations of infantile anger.

Graham and Wolff, 1950, described the importance of resentment in their series of 30 patients. Whatever the nature of the emotional disturbance observed, the latter was not associated with urticarial attacks unless the background of resentment was also present. Providing the latter qualification was satisfied, the attacks were precipitated as often by physical factors such as heat or mechanical trauma, as by changes in life situations. The personality structure of the group was essentially submissive and dependent, more particularly in relation to parental or other authoritarian figures. In most cases overt hostility had always been conspicuously lacking in their behaviour patterns, and rarely accompanied the ruminations which preceded the attacks of urticaria. Situations which precipitated attacks were those to which the patient's skin reacted as if he were taking a blow.

They considered the cutaneous vasodilatation was the essential part of the reaction and an exaggeration of the familiar flush of anger. Other emotions which produced flushing or blushing did not cause urticaria as they were too short lived. If prolonged, they would cause urticaria.

This theory is difficult to reconcile with the prolonged vasodilatation encountered in Rosacea.

Neurodermatitis and eczema

The term neurodermatitis is descriptive rather than diagnostic as opinions vary greatly as to the limitations of this diagnosis. Many writers consider it as essentially restricted to a group of frictional dermatoses secondary to pruritus or a psychic disturbance which induces the urge to rub or scratch, (Sequeira, 1947; Lutz, 1949; Edgell, 1953). Neurodermatitis is distinguished from eczema, with which it appears to be closely related, in that the latter is always a spontaneous, non-frictional dermatosis. Prurigo, as Bernier's prurigo and the later concept of atopic eczema, might possibly be said to bridge the gap between eczema proper and neurodermatitis.

Emotional factors are credited as of considerable importance in eczema by a number of writers, (Ingram, 1953; Sequeira, 1947; Hewitt, 1951). Ingram conceives of a 'constitutional eczema' in which both an external and an internal factor must operate to precipitate the dermatosis. In constitutional eczema, the internal factor is all-important and very commonly is psychogenic disturbance. The external factor then may be scratching or rubbing but usually of less intensity than would cause a skin

reaction in a non-eczematous subject. Exogenous eczema is chiefly found in the field of the industrial dermatoses. There the internal factor is again important in determining why some react to contact with a substance which others handle with impunity; why after many years of working with a substance, a sensitivity of the skin to this material suddenly develops; and why despite subsequent negative responses to skin testing, the dermal sensitivity to this contact irritant and allied substances may persist indefinitely. These and other related aspects of the occupational dermatoses are discussed by Hewitt, 1951. Both he and Ingram consider emotional disturbance as a vital factor in such reactions.

Sequeira considers that once eczema has been established, a vicious circle is set up by the associated itch and scratching. The type of reaction, wet or dry, is usually peculiar to the individual. Ingram expresses the view that emotional irritability is the basic factor in eczema. These patients project their emotional reactions on the skin and in time eczema becomes an uncontrollable habit like blushing, and augmented by a vicious circle set up by the social embarrassment of the lesions.

It seems reasonable to assume that some forms of eczema, including contact eczema, have strong psychic associations. This latter statement is admittedly controversial but it is of relevant interest that Guy, (1952), by exposing guinea pigs to a stress situation produced a state of nervous disturbance in the animals associated with an increased sensitivity to a locally applied test substance.

Terminology in this field of dermatology is most confusing. Apart from the labile group of reactions labelled as various forms of eczema, and the subclassifications of neurodermatitis, atopic dermatitis has tended to become separated as a distinct but related entity. The early writers on neurodermatitis did not distinguish between localised neurodermatitis and the more generalised form named by Brocq and Jacquet as 'chronic disseminated neurodermatitis'. Later writers tended to regard this generalised reaction as a separate entity and recognising its association with allergy, coined the term atopic dermatitis (Sulzberger, 1936; Brunstangⁱ, 1936). This allergenic association is not completely accepted but a distinction is usually made from the form of chronic disseminated neurodermatitis with no allergic history. Sulzberger among many others prefers to confine the term atopic eczema to a reaction pattern which begins as infantile eczema, disappears, and reappears in later life and is often associated with allergic illness. Beckers[,] (1949), classification of neurodermatitis has simplicity to commend it. He divides the group into dry or exudative, the former being either localised or disseminated. Disseminated neurodermatitis with an allergic history is atopic dermatitis.

Aetiological factors described in the neurodermatitis group are as varied as might be expected from the confusion of terminology and opinion. Williams, 1950¹, in summarising the aetiological theories for atopic dermatitis, pointed out the very large number of differing views, ranging from 'vagotonia' to 'the effects of emotional disturbance'. Localised neurodermatitis

is generally accepted as a scratch reaction usually secondary to local pruritus. Lobitz, 1952, suggested that sweat retention by causing pruritus was often responsible. A state of constitutional protoplasmic instability predisposing to the neurodermatitis reaction is favoured by Becker, 1932.

A vagotonic preponderance in neurodermatitis was noted by Stokes, 1932; Rogerson, 1947; and Brunner, 1948. The latter postulated the reaction as due to a cholinergic effect on the skin with secondary changes due to interference with skin nutrition and disinfection.

Atopic dermatitis has been the subject of innumerable papers. These in the main do not concern this thesis but it is of interest to note that despite the high incidence of allergic manifestations in the patients and siblings and the frequency of positive skin test reactions, (Rostenberg, 1949; Sulzberger, 1949), allergic factors are not considered of primary importance in this symptom complex, (Sulzberger and Baer, 1952). Its close relationship to infantile eczema is not yet fully understood, (Hill, 1952). Rostenberg, 1949, and Harley, 1950, support the view of an allergic neurovascular reaction akin to urticaria; Sulzberger and Zaidens prefer a polyvalent concept of aetiology, in which a personality vulnerable to emotional stress is the most important factor.

Enough has been said to show that much is not yet understood in this field of dermatology. As has been described in the previous chapter, the experimental work has not greatly helped to clear this confusion. Further contributions are

those of Sternberg and Zimmerman, 1952, who found the pituitary-adrenal cortex mechanism functioning normally in atopics, other than a suggested fault in the 'alarm reaction to stress'.

Sternberg and Baldrige, 1948, described a significant dysrhythmia in the EEGs. of patients with disseminated neurodermatitis.

As numerous as the dermatological papers on eczema and neurodermatitis are those reports where emotional factors are considered preeminently. The early work was mainly concerned with reporting cases where eczema followed psychic trauma and was relieved by psychotherapy or hypnotic suggestion.

This work has been competently reviewed by Stokes, 1932; Sack, 1933; and Dunbar, 1946. Sack, 1922, and Stokes, 1930, reported cases where eczema was associated with sexual maladjustment, the scratching being a masturbatory substitute. In Sack's case, the orgies of scratching were associated with sexual orgasms. Stokes, 1932, first discussed the clinical and personality factors in the eczema-asthma-hayfever, (E. A. HF.), group. He described them as tense, driving, restless, and over-ambitious, with underlying feelings of inadequacy or inferiority. This concept was elaborated by Rogerson in a series of papers, (1934; 1937; 1939; and 1947). In his classical description of children with the E.A.H.F. syndrome, he depicted them as restless, overactive, insecure, overanxious, and of high intelligence. Many attempted to dominate their parents and their environment by their skin. Parental anxiety and overprotection were common, but Rogerson believed the basic disorder was the characteristic personality constellation. This he regarded as constitutional.

Parental anxiety, in common with many other factors, served only to curb the child's freedom and initiative and induce frustration and tension. The latter in turn led to increased tissue irritability and scratching. In adult atopic dermatitis the basic characteristics were similar, the increased tissue irritability engendered by frustrations rendering the skin more susceptible to allergic or other precipitant mechanisms, (Rogerson, 1947). Stokes, 1940, and Hellier, 1944, confirmed Rogerson's views. Woodhead, 1946, described a similar personality disturbance in a group of children and young adults with a history of infantile eczema, prurigo and papular urticaria. Both Stokes and Woodhead stressed the importance of the disturbed interpersonal relationships which developed in the family as a result of the complex interactions between the psychological maladjustments of parents and child. It is of interest that 25 of her 26 patients occupied positions in the family which made them particularly susceptible to the psychological difficulties of their parents. This fact had also been noted by Rogerson and by Stokes. Williams, 1951, in a similar study of children with atopic eczema confirmed the basic personality structure but emphasised the importance of maternal rejection as a major factor. This was in agreement with the views of Miller and Baruch, 1948, on allergic children, and French and Alexander, 1941, on children with asthma. In contrast to Rogerson's findings, Williams found the mothers of the atopic children to be lacking in any expression of affection and often overtly hostile. He claimed a high rate of cure of the skin

condition by altering the rejecting attitude of the mother. So also did Rogerson by removing the child from the oppressive home environment, and Woodhead by reconciling parental conflicts.

The description of the personality structure in atopic children has not been seriously challenged. Piness, 1937, could not confirm their high intelligence as reported by Balyeat, 1929, and later by Rogerson.

Greenhill and Finesinger, 1942, in a study of atopic dermatitis patients found phobic and obsessional symptoms, and obsessional traits of personality, which approached the incidence of these factors in a psychoneurotic control group. Other features of the atopic group were difficulty in interpersonal relationships; repressed hostility, usually to family figures; and a shy, inadequate, sensitive personality. A high correlation was found between episodes of life stress and the exacerbations of eczema.

A serious criticism of this work is that it was carried out by questionnaires, and only five patients were closely studied. In these patients discussion of their emotional problems could produce an exacerbation of the skin condition.

Lynch et alia, 1945, in a study of atopic eczema and disseminated neurodermatitis found their patients fell into three groups. Those with eczema from infancy showed gross personality maladjustments, and the exacerbations of their skin condition were directly related to environmental stress. In the group where neurodermatitis began late in life, personality maladjustment was less prominent, and environmental disturbance all important.

Where eczema began in adolescence, the personality and behaviour patterns were akin to those of the neurotic. Environmental stress as a precipitant was less marked than in the other groups. All patients shared common characteristics of suppressed resentment, tension, and above average intelligence and assertiveness. The authors summarised their findings in terms of a dynamic concept of aetiology in which personality, allergic and environmental stress factors interacted in varying degree to produce the total reaction.

Becker, 1949, does not accept resentment as a specific factor in atopic dermatitis but merely representative of their hypersensitive reaction to life. He also doubted the allergic factor in this condition and emphasised the importance of tension and suppressed fatigue leading to masked exhaustion. He favoured a cholinergic basis to the skin reaction.

Other general reports on neurodermatitis are those of Klauder, 1925; Barinbaum, 1932; and Watt, 1947. Those with a more psychoanalytic orientation include Allenday, 1932; Bartemier, 1938; Ackerman, 1939; Pearson, 1940; Miller, 1942; and Mittleman, 1947. Gillespie, 1938, and Rogerson, 1939, suggested eczema may act as an escape device from conflict situations. However, the main psychodynamic trend is to regard neurodermatitis as a phenomenon of the sado-masochistic and exhibitionistic components of personality. Emotional difficulties occurred in relation to repressed aggression or hostility usually arising from conflict over frustrated dependent needs. Cases are described in which the skin reactions represented a source

of self-punishment for masturbation guilt, (Gillespie; Allenday); or for the guilt derived from castrative and sadistic impulses (Bartemier). The eroticisation of the skin lesion was reported by Gillespie; Bartemier; Pearson; Sack; and Stokes, scratching being of substitute masturbatory value. Others, (Miller; Bartemier; and Scarborough, 1948), emphasised the importance of hostility in scratching. This, derived from frustrated dependent needs, through guilt feelings is deflected from its original object on to the self. Their views, that the resultant disfigurement represents an exhibitionistic demonstration of shame, humiliation, rejection, or kindred emotion, is shared by Ackerman; Miller; and Mittleman, among many others. The longing for cutaneous contact and the urge to be taken care of as a child, is believed by Mittleman to be a characteristic of neurodermatitis cases as well as in the more commonly accepted urticaria or asthma patients. The localisation of the lesion receives its usual symbolic understanding in relation to conflict situations. It is noteworthy in this connection that Wittkower and Edgell, 1951, explain the characteristic flexural distribution of atopic eczema in terms of an attitude of symbolic supplication.

Walsh and Keirland, 1947, in a study of 15 patients with universal exfoliative dermatitis of psychogenic origin, found similar psychodynamic mechanisms of repressed hostility acted out in self-punitive scratching. Where the dermatosis arose in adult life a frustrating precipitating situation could usually be found, but in others the main disturbance was a personality one. Kepecs,

1951, found his 20 cases of atopic dermatitis fell into two groups. The majority were emotionally unstable and hysterical personalities whose dermatitis tended to be aroused by frustrated heterosexual relationships. The remainder were obsessive compulsive individuals with problems in the fields of work and responsibility. Their psychodynamics confirmed the importance of suppressed hostility to a mother figure or loved object. The exudation was related to suppressed weeping invoked by the threat of separation from the mother.

Wittkower and Edgell's, (1951), survey of a group of psychogenic eczemas of mixed type added little in the way of fresh concepts. The characteristic personality structure was that of anxiety, inadequacy, and insecurity in a dependant child always in need of reassurance and affection. They tended to be either overprotected or unwanted children. The adult patterns of behaviour repeated that of childhood. Stress situations relevant to the onset or exacerbations of eczema were threats of loss of external sources of support; to inner established patterns such as self-esteem; to life itself; or conflicts over sex and aggressiveness. They considered cutaneous contact with its implied sense of security as the crucial psychodynamic need and quoted Jelliffe's view that the exuding skin aspires to caress or be caressed. Thus the supplicant attitude of the atopic exhibiting his characteristic flexular eczema augments the appeal of his weeping skin.

Cormia, 1951, in a study of nine cases of atopic dermatitis found that the aggressive driving egocentric characteristics of

personality described by other authors were lacking in his patients. Instead they were complaisant and submissive. Family dissension was present in the background of all his atopics and he considered this an important factor by conditioning later maladjustments. He conceived of the atopic state as being a quiescent or latent one, all too readily activated or aggravated by psychic trauma. His view of the essential psychodynamics corresponds to that already described.

Davis and Bick, (1946), stress the anxiety factors in the onset and exacerbations of eczema in a military group, associated with a conscious or unconscious rejection of service. By formulating anxiety-producing stress situations, exacerbations of eczema could be induced.

The literature relevant to localised neurodermatitis as a clinical entity is scanty. The basic importance of tension and emotional disturbance in setting up a habit pattern of itching and scratching is discussed by Hubler, 1949; Becker, 1949; Sulzberger and Baer, 1949. The latter authors suggest that emotional tension reduces the pruritic threshold, a view later substantiated by Cormia's work on the itch threshold. Cormia, 1951, associated localised neurodermatitis with pruritus and stressed the symbolic importance of the localisation of the lesion. An excellent review of psychodynamic mechanisms and aetiological factors is that of Shaffer and Beerman, 1951.

Polymorphic prurigo is discussed by Marcussen, 1950, as a pruritic dermatosis based on constitutional intense dermatographism. Due to emotional disturbance the attention of the patient is

drawn to the normally unnoticed itching at friction sites and the resultant scratching causes the dermatosis. Shneider and Kesten, 1948, described the importance of emotional stress in ten cases of chronic generalised erythrodermia and their improvement by removal from unfavourable environmental circumstances. Calnan and O'Neill, 1952, observed a group of patients with acne necrotica of the scalp (localised neuro-dermatitis) in whom the onset and exacerbations were closely related to emotional stress. Anxiety was the predominant emotional feature, with hostility and resentment of minor but relevant importance.

Allergic Factors

These have largely been discussed in connection with atopic eczema and urticaria. However, some further points are worthy of consideration.

The earlier hypnotic experiments already described purported to show that vesication could be induced by hypnotic suggestion. Diehl and Heinichen, 1931, carried this a stage further when they claimed that by hypnosis the reaction to the intracutaneous injection of a specific allergen could be modified to a significant degree. Kartamischew, 1936, claimed similar striking effects, and Mom and Lousittou, 1943, reported that by hypnotic suggestion they were able to produce contact dermatitis and subsequent allergic sensitivity. Wittkower, 1938, claimed to have induced an allergic reaction to a specific innocuous substance under hypnosis. However, cutaneous testing with an extract of the offending substance was persistently negative. He was unable to

alter the cutaneous reactions to offending allergens in sensitised subjects, despite their facility in accepting hypnotic suggestions. Nor could he alter the skin test reactions even when the clinical symptoms were well controlled by hypnosis. Zeller, 1944, reported similar inability to modify allergic skin test reactions by hypnosis.

Further experimental proof is required before a judgment can be made, but if one accepts the production and inhibition of vesication under hypnosis, it is possible an allergic reaction of similar vesicular type might so also be modified.

General reviews on the subject of emotional factors in allergic skin disease include Sack, 1932; Wittkower, 1938; Stokes and Beerman, 1940; Dunbar, 1946. Many authors accept that emotional factors can modify an allergic response, and Sulzberger suggests the effect of same is to reduce the threshold to specific allergens. It is of relevant interest that Mitchell, 1947, in a study of 600 cases of allergic disorder found a large number of negative skin reactors who responded badly to treatment, and who showed considerable psychological maladjustment.

Psychodynamic views of allergic disorder are reviewed by Sontag, 1950. In brief his thesis is that emotional disturbance may precipitate an allergic reaction by an autonomic effect on cellular and enzyme function, and membrane permeability, in the direction of increased tissue reactivity and lowered threshold to allergic substances. Allergic reactions in the emotionally disturbed may act as conversion mechanisms for the expression of hostility, or as a defence against such expression. He states

that the association of dependency needs with asthma, and repressed hostility with allergic skin disorders, are the only two psychodynamic mechanisms generally accepted in allergic conditions. Other mechanisms are still in doubt.

Weiss, 1950, prefers to stress the frustration of repressed attachment to the mother as of aetiological importance in allergic skin reactions, the latter expressing a desire for cutaneous contact. He quotes Saul, 1946, that the presence of a dermal factor, either a local weakness, or psychic fixation on the skin, predisposes to skin allergic reactions in the presence of the maternal attachment psychodynamic mechanism. Miller, 1950, rather considers the allergic tendency as physiological and probably hereditary. In allergic children there is evidence of unconscious maternal hostility expressed in rejection or overprotection. The children remain overdependent, and their maturing delayed or prevented.

Idiopathic pruritus

Certain of the psychosomatic mechanisms associated with pruritus have already been discussed. One might recapitulate that the pruritic reaction and associated scratching or rubbing may express repressed sado-masochistic urges, (Stokes, 1930; Seitz, 1949 and 1951; Wittkower and Russell, 1953); satisfy erotic needs by substitute masturbation, (Winkler, 1911; Sadger, 1912; Cormia and Slight, 1927³⁵; Werther, 1933; Sack, 1933); or represent the projection of psychic irritation on to the skin, (Gillespie, 1938; Wittkower, 1953). The localisation of the

pruritus is considered significant, ano-genital pruritus being associated with psychosexual difficulties and generalised pruritus expressing a wider frustration and anxiety (Wittkower).

General reports on idiopathic pruritus are those of Klauder, 1925; Blaisdell, 1932; Klauder, 1936; and Stokes and Beerman, 1940. Klauder, 1936, gives an excellent general view of the subject. He points out that pruritus may occur at sites of psychic fixation persisting after the original cause had long disappeared. It may also be associated with fatigue or anxiety states or express a 'dermatophobia'. The localisation of the pruritus may be related to past emotionally charged events. He considers the sexual factors in pruritus are over-emphasised but accepts the high incidence of psychogenic disturbance in ano-genital pruritus. Senile pruritus is always psychogenic, and in his view an obsessional manifestation. MacKenna, 1944, and Sneddon, 1949, relate pruritus to obsessional thoughts directed to the relevant area and usually inspired by local minor lesions occurring at times of emotional conflict. This is in harmony with Rogerson's view that pruritus may follow a minor local lesion due to the focussing of anxious attention on that area.

Cormia and Slight, 1935; Gillespie, 1938; and Rogerson, 1939, report a high incidence of sexual maladjustment in ano-genital pruritus and favour the concept of cutaneous masturbation. Becker, 1949, described generalised pruritus and some cases of localised pruritus in terms of his 'exhaustion state' aetiological theory. O'Donovan, 1950, related most cases of pruritus to an anxiety state, although in ano-genital pruritus

sexual aberrations 'were not uncommon'. Venereophobia as a cause of pruritus often perineal or scrotal, is described by Romer, 1924; Drueck, 1943; and Kalz, 194⁵~~6~~. The latter pointed out the vicious circle of secondary lichenification arising from the scratching which by predisposing to further pruritus induces an even more intense focussing of attention on the appropriate region. Gillespie, 1938, described a case of pruritus vulvae where psychotherapy proved ineffective until the lichenified area had been excised. Cormia, 1951, found sexual conflicts almost invariable in a small series of patients with pruritus scroti. In four cases the paroxysms of itching were of a masturbatory pattern. Two cases revealed overt or latent homosexuality.

Pruritus vulvae has received considerable attention in the psychosomatic literature. Among the early writers were Kroneig, 1911; Bien, 1933; and Meyer, 1933. Like MacKenna, 1923, and Becker and Obermayer, 1947, they stressed the psychogenic factors in this condition.

Opinions vary on this point. Hunt, 1936, in a study of 300 cases of pruritus vulvae found only eight patients in whom psychogenic factors could be considered primary. Kernaky, 1945, in a twelve year study of 1422 consecutive cases considered that specific organic conditions accounted for at least 97% of these. Hill, 1950, on the other hand, regarded 75% of cases as being of psychological origin. Lynch, 1952, found a major proportion of 112 cases to be due to local, or organic systemic disease. Many displayed localised neuro-

dermatitis and 80% of his cases had a history of atopic disorder. He suggested emotional factors were important in many cases, particularly in relation to atopy or diabetes.

Many authors relate pruritus vulvae to sexual maladjustments of various forms, (Sequeira, 1911; MacKenna, 1923; Gillespie, 1938; Rogerson, 1939; Rosenbaum, 1945; Roxborough, 1947; and Ormsby and Montgomery, 1948). These maladjustments include masturbation, unsatisfied desire, sexual tension or excesses, coitus interruptus, and other forms of disharmony of the marital sexual relationship. Rogerson pointed out that pruritus vulvae occurs as frequently in unmarried as in married women. He suggested it may be used, by excoriation, to avoid uncongenial sex relations. Hunt, 1940, related pruritus vulvae to fear of cancer and fear of infection. Cormia, 1951, in a small series of cases found conflicts of an exclusively sexual nature in pruritus vulvae. The findings were similar for combined anal and genital pruritus. The patients displayed a characteristic pattern of childhood deprivation which appeared to engender difficult interpersonal relationships at work and in the home. Marital relationships were consequently disturbed by the patient's resentment and hostility. Ano-genital pruritus was usually associated with an anxiety state; pruritus vulvae alone, with a hysterical or obsessional pattern of behaviour.

Analytical studies in this field are lacking. Kreis, 1937, reported four cases of pruritus vulvae successfully treated by analysis. The only psychodynamically orientated study of a

large group of patients is that of Wittkower and Russell, 1953. They agreed that scratching in their 41 patients appeared associated with masturbation but in some cases may have been a sequel, rather than a cause, of the pruritus. The majority of patients displayed considerable psycho-sexual immaturity with long-standing sexual frustration, the latter often being intensified at the onset of the pruritus. Marital sexual life was usually very unsatisfactory, in some cases due to a female of normal or excessive sexual appetite being tied to a sexually incompetent husband. The main psychodynamic mechanisms were a strong father fixation and unresolved conflicts pertaining to this relationship; unconscious dissatisfaction with the imperfections of being a woman, with consequent repudiation of femininity and the female genitalia; and the revival by masturbation of previous onanistic guilt or related emotional conflicts including guilt over infantile incest phantasies. The pruritus had a self-punitive or self-destructive function.

The psychodynamic mechanisms quoted above are those usually accepted as casuistic in sexual frigidity. Wittkower appears not to have considered the important problem as to why frigidity should choose expression in this particular form in some individuals, and not in others, in precisely similar marital situations.

Pruritus ani has received much less attention than its female homologue and the literature on this subject is scanty and inadequate. The majority of contributions are studies of individual cases, (Saul, 1930⁸; Schilder, 1936; Gillespie, 1938;

and Rogerson, 1939). Schilder's case is representative of the majority view, in describing masochistic, passive, and homosexual wishes as playing a dynamic part in the psychic structure. Most authors accept the localisation of this pruritus as associated with overt or repressed homosexual trends. Cormia, 1951, in a study of 13 patients found no evidence of such trends, latent or overt. They all showed long-standing adult conflicts centred mainly on sexual or other marital difficulties. The pruritus was usually precipitated by emotional disturbance, rarely of a sexual nature. Anxiety and marital discord were the predominant features in most cases. A masturbatory component of the pruritus was noted in two cases only.

Wittkower in a study of a small group of cases found fixation at, or regression to, an anal stage of development. Associated with this phase of development were strong unconscious sadistic urges which produced emotional disturbance and were expressed in scratching when these impulses are turned on the self. Wittkower suggests that other immature forms of sexual gratification might also reasonably be expected to be associated. Thus he claimed that latent homosexual trends interfering with successful sexual performance could be found in most of the male cases studied. In women, the pronounced anal characteristics were associated with unconscious rejection of their femininity and local displacement of libido to the anal region. The relationship of paranoid fears and latent homosexuality so often quoted in the literature, led Wittkower to look for and find, that precipitating or aggravating

situations in pruritus ani were often those which intensified fears of persecution. He accounts for the preponderance of pruritus ani in males by the ease with which the anus can be used to express conflicts over latent homosexuality.

Hyperhidrosis and dyshidrosis

The association of palmar and planter hyperhidrosis with anxiety, tension, or other emotional disturbance, has been noted by many authors (Klauder, 1925; Lehmann, 1930; Gillespie, 1938; Rogerson, 1939; Stokes, 1940; MacKenna, 1944; Cormia, 1947; O'Donovan, 1950; Wittkower and Russell, 1953). Mayer, 1927, reviewed the earlier work in like terms. No more specific correlation between emotional state and excessive sweat secretion has been described, although Sequeira, 1947, does relate the latter to threats of danger, or emotions of fear or anger. Gillespie, 1938; Pearson, 1940; and Harris, 1944; reported cases in which an emotional hyperhidrosis by leading to secondary infection and consequent disability, enabled the compromise solution of certain conflicts to be accomplished. The conflicts in all cases were essentially between the desire to avoid, or flee from, an unpleasant situation and the high sense of duty imposed by a strong super-ego.

The controversy which exists as to the aetiology of cheiropompholyx has already been discussed. The majority view appears to favour its association with disordered sweat secretion. As such, the direct link with emotional hyperhidrosis is obvious. Occurring on the sites of predilection for emotional hyperhidrosis, the hands and feet, it readily

lends itself to symbolic interpretation in terms of a desire to 'throw in one's hand' or to avoid moving in a particular direction, (MacKenna, 1944; Cormia, 1947; Wittkower, 1948; Wittkower and Russell, 1953). Thus dyshydrotic pompholyx is commonly associated with the avoidance of uncongenial tasks or employment, and the evasion of specific unpleasant situations.

These views are based mainly on clinical observations and systematic studies are lacking. Cormia, 1951, investigated a small group of patients with this lesion. He noted that their backgrounds and personalities appeared essentially normal, and agreed that the skin reaction symbolised anxiety and resentment mainly in the occupational sphere. Wittkower, 1953, studied a group of 50 patients and in the majority found prolonged emotional maladjustment directly related to the onset of their skin reaction. The personality structure in such patients was as frequently hysterical as obsessional. Narcissism was a prominent feature, manifesting itself as excessive vanity, overwhelming ambition, or a morbid fear of hurt. In such cases the specific emotional disturbance which preceded the outbreak of cheiropompholyx involved either blows to vanity, frustration of ambition, or fear of danger or hardship.

Seborrhoeic states

The importance of emotional stress in seborrhoeic dermatitis is discussed by many authors, (Klaber, 1947; Sequeira, 1947; Sulzberger and Zaidens, 1948; Becker, 1948⁷; Bettley, 1950). Blaisdell, 1932, described a case where recurrences were regularly precipitated by emotional stress.

Stokes and Stenberg, 1939, stress the importance of emotional factors in the seborrhoeic eczema of the ear, scalp and nape of the neck occurring in later life. Dowling, 1939, and Ingram, 1939, describe the seborrhoeic personality as emotionally unstable and state that such patients tend to react with their skin to psychic stress.

Wittkower, 1947, supplies the only large scale psychosomatic study. His 100 cases of seborrhoeic dermatitis revealed personality characteristics of a predominantly obsessional type, with well marked feelings of inferiority and inadequacy and difficulties in social contacts. Their disfiguring skin lesion tended to make them feel ostracised. The underlying psychopathology for this reaction was usually severe repressed guilt relating to unconscious hostility to a parent figure. The unsightly skin lesion activated the hidden guilt and so was accepted by the patients as a well-deserved, self-inflicted, punishment. Precipitating situations for the dermatitis were those which affected social status or self-esteem. The predominant emotions aroused were anxiety, resentment, or shame.

In a subsequent review in 1948, Wittkower linked up Rosacea, acne vulgaris and seborrhoeic dermatitis as common to personalities who display social anxiety, are inadequate, inhibited, and harassed by conflicts over immature sexuality. However, as in 1947, he accepts that in seborrhoeic dermatitis many factors interact, and the emotional disturbance is one of only relative importance.

PART II

AIMS AND PROCEDURE

Chapter 1. Aims of the Investigation

Chapter 2. Case material

Chapter 3. Procedure

Chapter 1

Aims of the Investigation

From the foregoing study of the literature on the neuro-dermatoses it is apparent that many problems remain to be solved. The fundamental problem, from the viewpoint of this investigation, might be stated in the following terms.

Do the neurodermatoses exist as a true psychosomatic disease entity, in the sense that they are caused or potentiated by psychic stress, and therefore potentially able to be relieved by psychiatric treatment?

As has previously been discussed, there is a considerable body of evidence in support of a psychosomatic basis for certain skin disorders. If this psychosomatic hypothesis can be accepted, a number of other problems then emerge for consideration.

(1) Is there an explanation for certain individuals reacting to emotional stress by a skin disorder, rather than by other psychosomatic or neurotic disturbance?

(2) What factors determine the form of the skin disorder and its localisation?

(3) Are certain skin syndromes bound to specific forms of emotional disturbance, conflict situations, or personality maladjustments?

(4) Can the physiological mechanisms by which emotional stress is transmuted into a psychogenic skin disorder be explained?

(5) What is the value of psychiatric treatment in the neurodermatoses?

The broad aims of this work then will be to consider these problems in the light of the knowledge obtained from a study of relevant case material.

Certain of these points require further discussion.

If the neurodermatoses are a specific psychosomatic reaction to stress, the latter should occur in a significantly close temporal relationship to the onset of the skin condition and to its exacerbations. It must be clearly shown that the emotional disturbance associated with, or producing, the initial stress, does not follow the onset of the skin lesion. An exception is, however, made to this generalisation in the case of an initial organic lesion of the skin which is perpetuated or exacerbated by emotional disturbance. The stress or conflict situation must be one which, in the light of full knowledge of the patient's psychological background, is considered adequate to produce a significant emotional reaction. Relief of the stress situation or the emotional disturbance should be followed by alleviation of the skin condition, in the absence of other complicating factors.

The choice of the skin as a medium of emotional expression may be explained along physiological, dermatological, or psychological lines. If the latter is advocated as the sole explanation, it implies a purposive reaction based on unconscious mechanisms. The skin reaction therefore subserves a purpose

specific for the individual. This is the essence of the psychodynamic approach. The various aetiological theories adduced to explain such skin reactions may be superficially tested by defining and comparing their incidence over the field of the neurodermatoses. In this work certain of these psychodynamic mechanisms will be considered from this viewpoint. Similarly, the localisation of the lesion is believed to symbolise the underlying psychopathological conflicts. The validity of this theory may to some extent be assessed, by comparing the basic conflicts with the site of the skin disorder. Again, specific skin syndromes may similarly be related to particular emotional constellations or conflict situations.

The personality factors in psychogenic skin disorder are generally considered as being entirely non-specific. There appears to be no direct relationship between the personality type and the development of a neurodermatosis, or the form which the latter takes. This view will also be assessed in this work, by a clinical appreciation of the basic personality, aided by Rorschach studies. The aim of the latter will be to compare for each dermatosis certain of the traits of personality which the Rorschach test is claimed to reveal.

In many psychosomatic studies a specific skin syndrome has been taken, and assessed for personality, aetiological, or other factors. It would seem of relatively greater value if such findings were carefully compared with findings from similar investigations in other neurodermatoses. The true value of such factors could then be assessed as predominating in one

dermatosis rather than being generalised through the groups. This therefore is the approach principally used in assessing the clinical findings in this study.

One of the basic aims of this investigation is to attempt to identify aetiological factors of fundamental importance in specific dermatoses, as an aid to speedy assessment and treatment. If certain neurodermatoses are closely associated with particular conflict situations, forms of emotional disturbance, or personality maladjustments, then targets are readily available at which psychotherapy may be aimed. Thus the form of the neurodermatosis may act as a guide to direct psychotherapy or other indicated treatment.

A major problem to be solved, the physiological disturbances which link up the emotional stress and the skin reaction, are largely beyond the scope of this work. However, a hypothesis relevant to this point has been formulated. It will be discussed later in conjunction with a description of the pilot experiments carried out to test this hypothesis.

One can then sum up the principal aims of this work as follows:-

- (1) A clinical study of the neurodermatoses and a comparison of relevant aetiological factors for each syndrome.

- (2) To assess if the form of the neurodermatosis is specifically related to the underlying psychiatric disturbance or personality maladjustment.

- (3) To ascertain the indications for specific forms of treatment in particular dermatoses.

(4) To test experimentally a hypothesis of relevant importance to an understanding of the disturbed physiological conditions which underlie the neurodermatoses.

Other problems which have been raised in this discussion will be considered later, in the light of the above findings.

It has been referred to the Psychiatric
Department, Dermatology, Cardiff Royal Infirmary.
A small number have been referred to
the Department of Dermatology, University of
Liverpool. In some cases the psychi-
atric and dermatological disorders are independent of each other. In
other cases, in investigation, it was possible to
make a clear diagnosis. Where doubt as to
the diagnosis existed, the case was rejected. Also
in some cases where the primary skin disease
was of a type which is usually associated with
psychogenic factors, the evidence of associated psychogenic
factors was not sufficient to warrant a decision
in favour of the psychogenic hypothesis.
In some cases where a decision was made in
favour of the psychogenic hypothesis, the
evidence was not sufficient to warrant a decision
in favour of the psychogenic hypothesis.

From this secondary process of selection
a number of cases were selected for further
investigation.

The cases were selected on the basis of
the following criteria:

(1) The cases were selected on the basis of
the following criteria:

Chapter 2

Case material

A group of some 200 patients with various forms of neuro-dermatitis was chosen as the material for this study. These patients had been investigated and treated in the years 1951-1953, at the Psychiatric Outpatient Department, Cardiff Royal Infirmary, or as inpatients at Whitchurch Hospital, Cardiff. The majority of cases had been referred to the Psychiatric Department from the Departments of Dermatology, Cardiff Royal Infirmary, and related hospitals. A small number had been referred directly by their general practitioners, in some cases for psychiatric disturbance apparently independent of their skin disorder. In all cases used in this investigation, it was possible to establish a firm dermatological diagnosis. Where doubt as to the dermatological diagnosis existed, the case was rejected. Also rejected were those referred cases where the primary skin disorder was organic, and where evidence of ^{CONFIRMED} associated psychogenic aggravation was lacking. In effect, all cases where a dermatological diagnosis of neurodermatitis had been established were included in this study, irrespective of the psychiatric findings.

Apart from this secondary process of selection, the patients already formed a highly selected group, in their original choice for psychiatric assessment by the dermatologist or general practitioner. The basis for this initial selection was obvious psychiatric disturbance or personality maladjustment; neuro-dermatoses not reacting to dermatological treatment or persistently relapsing after successful therapy; for confirmation of

psychogenic factors in a suspected neurodermatitis; or where a primary organic lesion appeared potentiated or aggravated by psychogenic disturbance.

Thus the patients studied in this work cannot be considered as a truly representative group of neurodermatoses. They are a highly selected group, heavily loaded with psychogenic factors. The findings, of this investigation, therefore, may be applied only to the patients forming the case material or to others selected in a similar way. However, in so far as certain trends may emerge from this study, some light may be thrown on this somewhat obscure group of conditions which may act as a guide for further, more representative, investigations.

Of the patients considered suitable for treatment, 21 were referred for a minimum of two psychotherapeutic sessions. The patients were usually discharged when a certain amount of improvement in the skin condition was obtained. In no case was any attempt made to carry investigation or treatment beyond this stage. Under working conditions at the outpatient clinic, it was not

Chapter 3

Procedure

The greater proportion of this case material was investigated by the author. The remainder was dealt with by his psychiatric colleagues. Most patients were initially interviewed at the outpatient clinic, Cardiff Royal Infirmary. A small number were admitted as inpatients to Whitchurch Hospital.

The patients were seen in the course of a busy outpatient clinic and were investigated, as any other psychiatric case, by a detailed history obtained by a social worker and supplemented by the findings of the doctor in charge of the case. For the most part, in view of other pressing clinical commitments, it was not possible to give these patients preferential treatment. Of the patients considered suitable for treatment, the majority subsequently attended for a minimum of two psychotherapeutic sessions. The patient was usually discharged when symptomatic relief or significant improvement in the skin condition had been obtained. In no case was any attempt made to carry the investigation or treatment beyond this stage. Under the difficult working conditions at the outpatient clinic, it was not possible to do more than assess superficial problems and deal with them. The same difficulty was present, if to a lesser extent, with those admitted as inpatients, and physical methods of treatment were freely used where they appeared indicated. The criteria for admission to hospital were exactly the same for skin patients as for any psychiatric patient.

A number of the patients were referred for projection testing by the Rorschach method. The procedure and findings are described elsewhere in this work.

A further group of patients was also chosen for blood serum assay for acetylcholine. This research was restricted to Rosacea patients. The procedure and findings are described in the appropriate section of this thesis.

A follow up study was carried out on those patients who appeared to have benefitted from psychiatric treatment. The period of follow up varied from six months to over two years. This study was carried out by personal interview, or by a postal questionnaire sent to selected patients. The results are incorporated in this work.

The relevant data required for the analysis was extracted from the mass of clinical material by means of an item sheet containing over 150 items. It was not possible to obtain full information on all items from every case as the history was sometimes inadequate. However, the proportion of cases in whom adequate information was lacking was small, and fairly consistent for each item in each diagnostic group. Thus the tabulated data is reasonably representative of the comparative incidence of each item. Where for any reason, the reliability of the data for any item was held suspect, an appropriate indication of this was made in the text.

The main data obtained from the item sheets was then tabulated, the patients first being grouped in terms of their skin disorder. A difficulty arose here in the coexistence of

different neurodermatoses in the same patient. Such patients were allocated to diagnostic groups according to the skin reaction which predominated or which appeared to be most closely associated with their life stresses and conflicts. Cases where any real doubt existed were very few in number and certainly not enough to influence the patterns displayed by the group to which they had been assigned.

From the case histories, item sheets, and tabulated data, profile studies were drawn up for each of the diagnostic groups. In order to avoid prolixity, a full profile description of Rosacea was first made in which the relevant data are fully described. The principal features of the other conditions were then briefly depicted, using Rosacea as the descriptive prototype where necessary.

As already pointed out, it was not possible to carefully evaluate each principal item in every case. Thus this work is not intended as a statistical study of the incidence of certain factors in the neurodermatoses. Rather it is intended to indicate the findings obtained by the same group of doctors, working under identical conditions and with a consistent diagnostic and therapeutic approach. It was hoped that in this way possible discrepancies in individual cases would be ironed out over the group, and a reasonably factual representation of the clinical picture obtained.

The problem of a control group was carefully considered. It was appreciated that for a fully controlled survey, a group of normals and another of non-psychogenic skin diseases should be

utilised. Again it was not possible for this to be carried out in the time available, apart from the difficulty in establishing a 'normal' group. It was therefore decided to include a group of anxiety neurotics, selected only on the basis of their conforming to the approximate age and sex distribution of the total group of skin patients. Thus the relationship of the assessed factors to those in a specific neurotic population can be shown and thereby their deviation from 'normality' deduced.

1955-56

1956-57

1957-58

Discussion of findings

PART III

CLINICAL ANALYSIS

- Chapter 1. Introduction and tabulated data
- Chapter 2. Profile Studies
- Chapter 3. Discussion of findings

Chapter 1

Introduction and tabulated data

The case material analysed in this work consisted of 202 patients, subdivided into the following diagnostic groups.

| | |
|--|------------|
| 1. Rosacea | - 21 cases |
| 2. Urticaria | - 20 cases |
| 3. Dyshydrosis | - 24 cases |
| 4. Pruritus ani | - 21 cases |
| 5. Pruritus vulvae | - 14 cases |
| 6. Other localised or generalised pruritus | - 10 cases |
| 7. Seborrhoeic dermatitis | - 23 cases |
| 8. Atopic eczema | - 20 cases |
| 9. Neurodermatitis | - 49 cases |
| 10. Anxiety neuroses | - 40 cases |

Three cases of erythrophobia are described in relation to the profile description of Rosacea. They are not included in the tabulated analysis. Included in the urticaria group are patients with dermographic prurigo. Dyshydrosis is taken to include hyperhidrosis or cheiropompholyx, whether occurring alone or in combination. Pruritus ani and vulvae are considered separately from the other forms of idiopathic pruritus, in view of the specific aetiological factors commonly imputed to these syndromes. Sycosis barbae is included with seborrhoeic dermatitis. Atopic eczema is however segregated from other forms of neurodermatitis as it is usually described as a separate entity. The other forms of neurodermatitis are not specifically distinguished,

and are considered as a unitary group in the tabulated findings.

The data obtained from this clinical material was then tabulated under the following main headings:-

| | | | |
|----------|---|---|----------------|
| Table 1 | - | Case material | |
| Table 2a | - | } | |
| Table 2b | - | } | Family History |
| Table 3a | - | Adjustment as child | } |
| Table 3b | - | Adjustment as adult (work & social) | } |
| Table 3c | - | Adjustment as adult (sexual & marital) | } |
| Table 3d | - | Other factors of significance | } |
| Table 4 | - | Significant Factors in skin disorder | |
| Table 5 | - | Major life stresses relevant to skin disorder | |

The personality factors in each case were tabulated in an item sheet containing 44 items of personality. An attempt to express these in quantitative form was abandoned as it was impossible to satisfactorily evaluate these principal items of personality under the conditions in which this work was carried out. However, where certain personality patterns appeared to predominate, these are described in the profile studies for each syndrome.

The sub-headings into which each table is divided are on the whole, self-explanatory. Certain of these are, however, clarified in the profile studies.

Each profile study is intended to be an independent entity. A certain amount of repetition in each is therefore unavoidable.

CLINICAL ANALYSIS

Tables 1 - 5

(Initial letter or letters are used to designate diagnostic groups, and controls, (C).)

Table 1

CASE MATERIAL

(1) = Range (2) = Mean (3) = Standard Deviation.

| (No.) | R (21) | U (20) | D (24) | P.A. (21) | P.V (14) | P (10) | S (23) | A.E (20) | N (49) | Total (202) | Controls (40) |
|--------------------------------------|------------|------------|-------------|--------------|-------------|-----------|-------------|--------------------|-------------|----------------|------------------|
| <u>AGE</u> | | | | | | | | | | | |
| (1) | 28 - 48 | 21 - 61 | 18 - 52 | 21 - 53 | 21 - 61 | 27 - 59 | 20 - 60 | 16 - 44 | 20 - 68 | 16 - 68 | 21 - 54 |
| (2) | 39.2 | 38.9 | 39 | 39 | 41.4 | 45.4 | 36.5 | 24.5 | 46.8 | - | 38.2 |
| (3) | ± 4.6 | ± 13.1 | ± 10.2 | ± 9.2 | ± 12.4 | ± 10.8 | ± 12.3 | ± 6.7 | ± 13.3 | - | ± 12.8 |
| <u>SEX</u> | | | | | | | | | | | |
| Female. | 15 | 12 | 8 | 4 | 14 | 4 | 4 | 11 | 25 | 97 | 20 |
| Male. | 6 | 8 | 16 | 17 | - | 6 | 19 | 9 | 24 | 105 | 20 |
| <u>MARRIED.</u> | | | | | | | | | | | |
| | 16 | 15 | 16 | 16 | 14 | 6 | 13 | 5 | 37 | 138 | 27 |
| <u>AGE.</u> | | | | | | | | | | | |
| (1) | 20 - 48 | 2 - 55 | 14 - 51 | 19 - 47 | 19 - 60 | 22 - 49 | 15 - 49 | usually infancy | 19 - 66 | 2 - 66 | 21 - 52 |
| (2) | 32.5 | 32.9 | 30.2 | 32 | 37.3 | 41.2 | 28.8 | N.A | 38.6 | - | 32.5 |
| (3) | ± 7.8 | ± 13.8 | ± 13.1 | ± 7.8 | ± 13.1 | ± 10.9 | ± 11.3 | N.A | ± 13.8 | - | ± 9.3 |
| <u>ONSET</u> (in years) | | | | | | | | | | | |
| | 0.5 -25 | 0.5 -40 | 0.25 -25 | 0.17 -19 | 0.5 -15 | 1 - 10 | 0.25 -20 | 1 - 44 | 0.25 -16 | 0.17 -40 | 0.2 -17 |
| <u>DURATION OF</u> <u>NEURO -</u> | | | | | | | | | | | |
| (2) | 5.8 | 4.7 | 7.6 | 6.7 | 4.2 | 4.2 | 7.8 | see | 4.3 | - | 3.4 |
| (3) | ± 2.8 | ± 4.5 | ± 3.4 | ± 4.6 | ± 4.1 | ± 3.2 | ± 4.8 | text | ± 3.9 | - | ± 3.3 |
| <u>DURATION</u> < 1 yr. | 6 | 4 | 6 | 4 | 4 | 2 | 3 | 1 | 12 | 42 | 11 |
| (No. of 1 - 2 yrs. | 4 | 6 | 3 | 2 | 3 | 2 | 1 | 2 | 10 | 33 | 10 |
| Pts.) 2 - 5 yrs. | 2 | 5 | 4 | 5 | 4 | 3 | 7 | 1 | 13 | 44 | 8 |
| < 10 yrs. | 5 | 1 | 7 | 5 | 1 | 1 | 9 | 13 | 9 | 51 | 5 |

Table 2a

Family History

| Disturbance of family background. | R % | U % | D % | P.A % | P.V % | P % | S % | A.E % | N % | C % |
|--|-----|-----|-----|-------|-------|-----|-----|-------|-----|-----|
| (1) Premature death of one or both parents. | 29 | 10 | 21 | 14 | - | - | 22 | 20 | 37 | 35 |
| (2) Parental divorce or separation. | - | 5 | 4 | 5 | - | - | 4 | - | 4 | 5 |
| (3) Domestic strife. | 14 | 15 | 21 | 24 | 28 | 20 | 30 | 15 | 14 | 40 |
| (4) Other. | 7 | 15 | 13 | 10 | 7 | 10 | 8 | 15 | 21 | 10 |
| Total incidence of disturbance in family background. | 38 | 40 | 42 | 43 | 36 | 30 | 52 | 40 | 55 | 60 |
| <u>Faulty parental attitudes.</u> | | | | | | | | | | |
| (1) Overprotection. | 39 | 20 | 13 | 24 | 43 | 30 | 26 | 75 | 31 | 25 |
| (2) Deprivation or rejection. | 10 | 20 | 21 | 24 | 14 | 10 | 13 | 20 | 23 | 15 |
| (3) Over-rigid or critical. | 24 | 15 | 8 | 24 | 43 | 30 | 17 | 40 | 15 | 15 |
| Total incidence of faulty parental attitudes. | 58 | 45 | 34 | 53 | 64 | 50 | 48 | 75 | 53 | 35 |
| <u>Parental Health.</u> | | | | | | | | | | |
| (1) Neurotic disturbance. | 24 | 20 | 21 | 34 | 28 | 40 | 22 | 15 | 41 | 50 |
| (2) Neurodermatitis. | - | - | 4 | 14 | - | - | - | 5 | 6 | - |
| (3) Psychosomatic illness. | 19 | 10 | 8 | 24 | 21 | - | 9 | 45 | 10 | 10 |
| (4) Other, of anxiety value. | 19 | 25 | 25 | 10 | 21 | 10 | 13 | 20 | 8 | 30 |

Table 2b.

Family History

| No. of children in family. | R | U | D | P.A | P.V | P | S | A.E | N | C |
|--|--------|--------|-------|--------|--------|-------|-------|-------|--------|--------|
| | | | | | | | | | | |
| (1) Range | 1 - 11 | 2 - 21 | 1 - 9 | 1 - 12 | 1 - 11 | 2 - 9 | 1 - 8 | 1 - 8 | 1 - 14 | 1 - 11 |
| (2) Mean | 5.1 | 6.1 | 4.1 | 5.4 | 4.6 | 5.6 | 4.2 | 3.4 | 4.5 | 4.1 |
| (3) S.D. | + 2.7 | + 4.9 | + 1.9 | + 3 | + 3 | + 1.7 | + 2.2 | + 2.4 | + 3.1 | + 2.9 |
| <u>Vulnerable</u> <u>family</u> <u>position</u> (% incidence) | % | % | % | % | % | % | % | % | % | % |
| | 19 | 20 | 26 | 29 | 21 | 30 | 34 | 40 | 26 | 45 |
| | 24 | 20 | 26 | 10 | 14 | - | 17 | 15 | 22 | 15 |
| | 5 | - | 10 | 5 | 21 | - | 13 | 15 | 12 | 5 |
| | 10 | 5 | - | 5 | 7 | 20 | 4 | 5 | 8 | - |
| Total. | 58 | 45 | 62 | 49 | 63 | 50 | 68 | 75 | 68 | 65 |
| <u>Sibling</u> <u>Health</u> (% incidence) (1) Neurotic disturbance (2) Neurodermatitis (3) Psychosomatic illness (4) Other illness of anxiety value. | 29 | 15 | 17 | 29 | 14 | 10 | 4 | 5 | 16 | 20 |
| | - | 15 | - | 5 | - | - | - | 15 | 8 | - |
| | 10 | 5 | 8 | - | - | - | 13 | 25 | 4 | 10 |
| | 5 | - | 8 | 10 | 14 | 10 | 9 | 20 | 12 | 25 |
| <u>Material Background of home good or</u> <u>adequate.</u> (% incidence) | 86 | 95 | 96 | 90 | 100 | 80 | 83 | 100 | 80 | 75 |
| <u>Unhappy childhood environment</u> (% incidence) | 5 | 25 | 4 | 19 | 28 | 40 | 13 | 20 | 16 | 20 |

Table 3(a)

Personal History - Adjustment as a Child

| | R % | U % | D % | P.A. % | P.V. % | P % | S % | A.E. % | N % | C % |
|---|--------|--------|--------|-----------|-----------|--------|--------|-----------|--------|--------|
| <u>FAULTY CHILD-PARENT RELATIONSHIP</u> (1) Over dependent (2) Hostile (3) Ambivalent | 38 | 10 | 13 | 14 | 28 | 20 | 17 | 40 | 22 | 25 |
| | 14 | 15 | 25 | 24 | 28 | 20 | 22 | 40 | 16 | 15 |
| | 10 | 5 | 8 | 19 | 14 | 20 | 4 | 35 | 28 | 10 |
| | 43 | 25 | 42 | 48 | 57 | 40 | 39 | 65 | 44 | 40 |
| <u>% WITH FAULTY ATTITUDES TO PARENTS</u> | | | | | | | | | | |
| <u>FAULTY SIBLING RELATIONSHIPS</u> (1) Over dependent (2) Rivalry or hostility | 10 | 5 | - | 5 | - | - | - | - | - | 5 |
| | 5 | 15 | 4 | - | 28 | 10 | 4 | 20 | 4 | 5 |
| <u>NEUROTIC TRAITS</u> (1) Marked (2) Present (3) Minor or vague | 10 | - | - | 19 | 14 | 10 | 17 | 10 | - | 15 |
| | 62 | 20 | 4 | 10 | 28 | 30 | 13 | 10 | 14 | 25 |
| | 19 | 20 | 42 | 10 | 21 | 20 | 30 | 30 | 22 | 35 |
| | 91 | 40 | 46 | 39 | 63 | 60 | 60 | 50 | 36 | 75 |
| Total. | | | | | | | | | | |
| <u>SCHOOL RECORD</u> (1) Higher education (2) Grammar school (3) Average scholars) Secondary (4) Poor scholars) or lower (5) Poor adjustment to school. | - | - | 4 | - | - | - | - | - | 8 | 5 |
| | 14 | 20 | 29 | 29 | 21 | 30 | 13 | 25 | 6 | 7.5 |
| | 72 | 60 | 63 | 71 | 79 | 60 | 83 | 70 | 68 | 77.5 |
| | 14 | 20 | 4 | - | - | 10 | 4 | 5 | 18 | 10 |
| | 14 | 10 | 8 | 10 | 21 | - | 17 | 15 | 12 | 10 |

Table 3(a) .. (contd)

Personal History - Adjustment as Child

| | | R % | U % | D % | P.A % | P.V % | P % | S % | A.E % | N % | C % |
|------------------------------------|--|--------|--------|--------|----------|----------|--------|--------|----------|--------|--------|
| <u>FAULTY SOCIAL ADJUSTMENT</u> | | | | | | | | | | | |
| (1) Severe | | 24 | 10 | 4 | 14 | 7 | 10 | 13 | 5 | 8 | 15 |
| (2) Moderate | | 48 | 20 | 13 | 10 | 43 | 20 | 30 | 10 | 16 | 55 |
| Total. | | 72 | 30 | 17 | 24 | 50 | 30 | 43 | 15 | 24 | 70 |
| <u>FAULTY CHILDHOOD ADJUSTMENT</u> | | | | | | | | | | | |
| (1) Severe | | 14 | 10 | - | 10 | 14 | 20 | 22 | 5 | 6 | 20 |
| (2) Moderate | | 66 | 15 | 17 | 24 | 50 | 40 | 34 | 10 | 18 | 45 |
| Total. | | 80 | 25 | 17 | 34 | 64 | 60 | 56 | 15 | 24 | 65 |

Table 3 (b).

Personal History - Adult Adjustments (Work and Social)

| | R % | U % | D % | P.A. % | P.V. % | P % | S % | A.E. % | N % | C % |
|---|--------|--------|--------|-----------|-----------|--------|--------|-----------|--------|--------|
| <u>Basic Occupation</u> (1) Professional (2) Executive (3) Skilled (4) Semi-skilled (5) Unskilled (6) Student | - | - | 13 | 5 | - | - | - | - | 12 | 5 |
| | - | 5 | 29 | - | - | 10 | 22 | 10 | 6 | 7.5 |
| | 19 | 20 | 8 | 29 | 7 | 20 | 13 | 20 | 22 | 22.5 |
| | 62 | 50 | 42 | 56 | 64 | 50 | 39 | 60 | 40 | 35 |
| | 19 | 25 | 8 | 5 | 29 | 20 | 22 | 10 | 20 | 30 |
| | - | - | - | 5 | - | - | 4 | - | - | - |
| <u>Work Record</u> (1) Never worked (2) Very stable (3) Average stability (4) Unstable | 5 | 10 | 8 | - | 14 | - | - | 15 | 8 | 5 |
| | 24 | 5 | 34 | 43 | 21 | 50 | 13 | 15 | 24 | 15 |
| | 61 | 85 | 54 | 52 | 65 | 50 | 74 | 65 | 64 | 65 |
| | 10 | - | 4 | 5 | - | - | 13 | 5 | 4 | 15 |
| <u>Present employment</u> (1) Stressful (2) Very responsible (3) Dislikes | 5 | 30 | 50 | 24 | 21 | 50 | 26 | 15 | 44 | 12.5 |
| | 5 | 20 | 46 | 14 | - | 30 | 17 | 10 | 22 | 10 |
| | - | 5 | 4 | 14 | - | - | 13 | 15 | 8 | 5 |
| <u>Faulty Work Adjustment</u> | 10 | - | 4 | 5 | - | - | 8 | 5 | 4 | 10 |
| <u>Faulty Social Adjustment</u> (1) Moderate (2) Severe | 62 | 20 | 21 | 38 | 57 | 30 | 43 | 15 | 26 | 35 |
| | 10 | 10 | - | - | - | 20 | 13 | 5 | 4 | 10 |
| <u>Social Interests</u> (1) Solitary (2) Restricted (3) Normal | 24 | 10 | 8 | 10 | - | 10 | 17 | 15 | 8 | 10 |
| | 47 | 35 | 21 | 24 | 36 | 40 | 53 | 20 | 43 | 40 |
| | 29 | 55 | 71 | 66 | 64 | 50 | 30 | 65 | 49 | 50 |

Table 3 (c)

Personal History - Adult Adjustments (Sexual and Marital)

| Sexual Adjustment (other than marital). | R. % | U. % | D. % | P.A. % | P.V. % | P. % | S. % | A.E. % | N. % | C. % |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------|-------------------|-------------------|
| (1) Immature or inhibited. | 58 | 30 | 21 | 24 | 50 | 30 | 47 | 55 | 26 | 35 |
| (2) Severely maladjusted. | 14 | - | 4 | 10 | 14 | 30 | 13 | 5 | 8 | 12.5 |
| (3) Homosexual. | 5 | ? 10 | - | 5 | - | ? 10 | - | - | - | - |
| <u>Marital History</u> | | | | | | | | | | |
| (1) Patients married (no.) | 16 (76%) | 15 (75%) | 16 (67%) | 16 (76%) | 14 (100%) | 6 (60%) | 13 (57%) | 5 (25%) | 37 (76%) | 27 (67%) |
| (2) Duration (a) range (in years) (b) mean | 3-29 16 | 1-37 19.7 | 3-21 12.7 | 3-28 16.8 | 2-33 14.9 | 5-35 22.1 | 1-31 12.9 | 1-7 3.2 | 1-32 17.6 | 2-25 11.5 |
| (3) Separated or divorced. | 12% | 7% | 12% | 6% | - | - | 8% | - | 5% | 11% |
| (4) Widowed | - | 13% | - | - | 7% | - | 8% | - | 11% | 7% |
| (5) No children. | 19% | 26% | 19% | 19% | 57% | 33% | 31% | 60% | 14% | 11% |
| (6) Children:- (a) range (b) mean (c) S.D. | 1-5 1.8 1.1 | 1-5 2.1 1.1 | 1-3 1.8 0.7 | 1-4 2.4 0.9 | 1-5 2.7 1.6 | 1-2 1.3 0.5 | 1-6 1.7 1.8 | N.A. N.A. N.A. | 1-8 2.5 1.7 | 1-5 1.8 1.4 |

Table 3 (c) (contd.)

Personal History - Adult Adjustments (Sexual and Marital)

| <u>Marital History</u> | | R. % | U. % | D. % | P.A. % | P.V. % | P. % | S. % | A.E. % | N. % | G. % |
|---|-----|---------|---------|---------|-----------|-----------|---------|---------|-----------|---------|---------|
| of no. married (7) Marital incompatibility (8) Sexual disharmony (9) Faulty attitude to children:- (a) Overprotects (b) Rejects or resents | 1/2 | 50% | 27% | 19% | 31% | 21% | 16% | 31% | 20% | 16% | 30% |
| | 1/2 | 56% | 40% | 37% | 50% | 64% | 50% | 31% | 20% | 40% | 37% |
| | 1/2 | 25% | 13% | 12% | - | 21% | - | - | - | 16% | 15% |
| | 1/2 | - | 7% | 6% | 12% | - | - | 8% | - | 8% | 5% |

Table 3(d)

Significant factors in health of patient and family

| <u>Health of</u> <u>patient</u> | <u>R.</u> % | <u>U.</u> % | <u>D.</u> % | <u>P.A.</u> % | <u>P.V.</u> % | <u>P.</u> % | <u>S.</u> % | <u>A.E.</u> % | <u>N.</u> % | <u>C.</u> % |
|-------------------------------------|----------------|----------------|----------------|------------------|------------------|----------------|----------------|------------------|----------------|----------------|
| (1) Frank neurosis | 38 | 25 | 29 | 53 | 43 | 40 | 56 | 20 | 41 | - |
| (2) Psychosomatic illness | 19 | 25 | 13 | 19 | 14 | 10 | 22 | 75 | 18 | 30 |
| <u>Health of</u> <u>spouse</u> | | | | | | | | | | |
| (1) Nervous disturbance | 37 | 7 | 19 | 12 | 7 | - | - | - | 5 | 11 |
| (2) Psychosomatic illness | 6 | - | 12 | - | - | - | - | - | 5 | 7 |
| (3) Chronic ill-health | 25 | 13 | 19 | 6 | 7 | - | 15 | - | 8 | 11 |
| (4) Sexual maladjustment | 25 | 7 | 19 | 31 | uncertain | 17 | 22 | - | 30 | 37 |
| <u>Health of</u> <u>children</u> | | | | | | | | | | |
| (1) Nervous disturbance | 19 | 7 | 19 | 6 | 7 | - | 13 | - | 11 | 26 |
| (2) Psychosomatic illness | - | - | - | 6 | - | - | - | - | - | 15 |
| (3) Neuro dermatitis | - | - | - | - | - | - | 9 | - | 5 | - |

Table 4.

Significant factors in skin disorder

| <u>SKIN DISORDER</u> | | R. % | U. % | D. % | P.A. % | P.V. % | P. % | S. % | A.E. % | N. % |
|---|--|--|--|---|---|--|---|--|--|---|
| <u>Course</u> (1) continuous with exacerbations (2) predominantly phasic. | | 71 | 20 | 79 | 76 | 79 | 50 | 34 | 50 | 86 |
| | | 29 | 80 | 21 | 24 | 21 | 50 | 66 | 50 | 14 |
| Significant stress preceding onset. | | 81 | 80 | 83 | 90 | 86 | 60 | 60 | 35 | 76 |
| Significant stress preceding major exacerbations. | | 100 | 75 | 100 | 76 | 86 | 40 | 87 | 55 | 84 |
| Stress directly arising from personal maladjustment. | | 14 | 10 | 21 | 24 | 28 | 50 | 43 | 25 | 20 |
| Occurring in course of a neurosis. | | 29 | 40 | 21 | 38 | 50 | 50 | 43 | 20 | 38 |
| <u>Principal precipitant factors</u> (1) Emotional disturbance. (2) Excitement or tension. (3) Worry or anxiety. (4) Thermal changes. (5) Exercise. (6) Fatigue. (7) Anger. (8) Resentment or hostility. (9) Social embarrassment. | | 90 34 19 66 14 14 14 19 90 | 80 70 25 50 10 20 20 30 25 | 96 79 71 13 13 21 - 50 42 | 86 43 71 71 - 24 - 39 - | 50 21 64 50 - 14 14 28 - | 40 30 60 30 - 10 - 10 - | 78 60 30 22 - 26 34 53 - | 45 40 30 30 - 15 10 25 - | 60 56 42 14 - 28 14 38 14 |
| History of other neurodermatoses. | | 14 | 10 | 13 | 43 | 72 | 20 | 22 | 10 | 32 |
| Related skin trauma. | | - | - | 42 | - | 21 | - | 4 | - | 20 |

Table 5. Major life stresses directly related to onset or exacerbations of skin disorder.

| | R. % | U. % | D. % | P.A. % | P.V. % | P. % | S. % | A.E. % | N. % |
|--|---------|---------|---------|-----------|-----------|---------|---------|-----------|---------|
| Separation from a loved one. | 14 | 5 | - | - | 7 | - | 17 | - | 12 |
| Anxiety or conflicts relating to close relatives. | 14 | 35 | 34 | 24 | 28 | 10 | 22 | 50 | 32 |
| Marital difficulties. | 29 | 25 | 17 | 24 | 50 | 20 | 17 | 10 | 22 |
| Conflicts over relatives by marriage. | 5 | 20 | 17 | - | 21 | - | 17 | - | 8 |
| Anxiety relating to personal health (other than skin). | 14 | 20 | 13 | 54 | 43 | 30 | 13 | 10 | 8 |
| Financial anxieties. | 14 | 10 | 8 | 10 | 7 | - | 13 | - | 10 |
| Housing difficulties. | 5 | - | - | - | 7 | - | - | - | 16 |
| Occupational stresses. | - | 25 | 66 | 38 | - | 40 | 30 | 15 | 40 |
| Sexual difficulties. | 14 | 5 | 4 | 38 | 64 | 40 | 30 | 25 | 14 |
| Situations productive of resentment and hostility. | 38 | 45 | 42 | 76 | 50 | 40 | 43 | 40 | 40 |
| Situations provocative of guilt feelings. | 19 | 25 | 21 | 29 | 14 | 30 | 34 | 30 | 14 |
| Other anxiety-producing situations. | 24 | 45 | 25 | 14 | 28 | 20 | 13 | 40 | 28 |

PROFILES

| | <u>Page</u> |
|------------------------------|-------------|
| Rosacea | 73 |
| Urticaria | 87 |
| Dyshydrosis | 95 |
| Pruritus Ani | 105 |
| Pruritus Vulvae | 111 |
| Pruritus | 117 |
| Seborrhoeic Dermatitis | 122 |
| Atopic Eczema | 131 |
| Neurodermatitis | 140 |

Rosacea - 21 patients

Average age, 39.2 years. Sex distribution, 15 female (71%); 6 males (29%). Married, 16 (76%). Average duration of skin condition, 5.8 years. Average age at onset, 32.5 years.

The family background of the group displayed some evidence of early disturbance in 38% of cases. The parental history revealed the death of the father in the early life or adolescence of 5 patients, and the similar death of the mother in one. In one patient a hostile stepfather was acquired; another was illegitimate. Persistent domestic strife was a notable feature in the family background of 3 patients. As a group they tended to be overprotected by their parents, 8 patients (38%) displaying this history. In one case deprivation of affection and rejection by the parent was gross; in another, present but to a lesser degree. In 5 cases, one or both parents were strict, rigid, disciplinarians, and the family standard of behaviour set at a high moral or religious level. In 5 patients, the parents showed well marked evidence of neurotic disturbance, and in another 4 cases, there was a parental history of psychosomatic disorder, principally asthma. Parental illness was of further importance in its implications to the patient of feared hereditary illness such as cancer, or in imposing financial difficulties by the early death or chronic illness of the father. Where the mother had to work or was in chronic ill-health, an undue burden of domestic responsibility tended to be imposed on the patient in early youth^t. Chronic ill-health of one or both parents, especially when attended by economic difficulties, was a potent

source of strained interpersonal relationships in the family unit. However, the home background was described as being reasonably happy by 16 patients, 76%, and in only one case was the family life grossly unhappy.

Rosacea patients tended to come of large families, the average being 5.1, (± 2.7). They were considered to occupy a vulnerable position in the family group if the oldest, youngest, or only child; or where there was a large gap in years to the next child so that the patient had been virtually reared as the youngest or only child. Twelve patients, (58%), could be assessed as occupying such vulnerable positions. Sibling health appeared fairly good, although in 6 patients the siblings displayed significant evidence of neurotic disturbance and in a further 2 cases of psychosomatic disorder.

As might be anticipated from the disturbed background, the early adjustment of the group was not good. The presence of neurotic traits in the form of enuresis, nightmares, somnambulisms, nail-biting, and various phobic fears, was marked in two patients. However, a further 13 patients described themselves as always timid and shy, nervous, sensitive, and afraid of the dark or of heights. In another 4 cases, the patient was described as a 'delicate' child, given to frequent minor ill-health. The predominant impression was of timid, retiring, shy, socially ill-adjusted children, with nervous fears of considerable intensity.

In some cases this early difficulty extended through their school lives, but a substantial proportion appeared to

show some improvement in their social adjustments, and to mix at sport and other social activities. However, 3 patients (14%), revealed a poor adjustment to school, in their inability to mix and adapt themselves to group activities. The general level of educational attainment was not high, and in only 3 cases was education continued after the age of 14 years. In 3 cases, intelligence as assessed by their scholastic records, appeared considerably below average.

The childhood adjustments of the group was considered as significantly faulty in 17 cases (80%).

The work records of the group in all cases except 2 were stable, in 5 cases almost to the point of inertia. In the latter category, which included 4 males, were individuals who had remained in the one post for a period ranging from 11-33 years. Of the 4 men, all had been in the one job 20 years or over, and seemed content to continue happily in mundane, routine, employment with little or no hope of promotion. The majority of patients, many of whom as married women had had their work careers cut short by marriage, also revealed a similar tendency to stay in the one employment for many years and to change their jobs infrequently. Of the two patients with disturbed work records, one had a history of hysterical illness which interfered with an attempted career as a nurse. She finally gave up nursing on this account and for 13 years since, had been content to keep house for a bachelor brother. The second case was a patient, grossly deprived in childhood, and whose subsequent maladjustment has been severe. Homeless and ill-equipped socially, he

wandered around the country in innumerable labouring jobs, with occasional delinquent episodes which brought him into the hands of the police.

In only one case was the basic employment a responsible one and a source of stress to the patient.

The intelligence of the group might be roughly assessed on their occupational level and scholastic records. Except for the one patient who had unsuccessfully attempted nursing, none had held professional or executive posts. Only 4 were skilled workers in the sense of being employed in a craft which required prolonged training. The remainder were semi-skilled employees, usually office or shop workers, with the exception of 4 whose occupations were unskilled, and one who had never worked but simply helped in the home. The scholastic records of the group were fairly uniformly undistinguished.

It might reasonably be assumed that the intellectual level of the group was at best, average.

Sixteen patients were married. Their marital histories ranged in duration from 3-29 years. Three marriages were childless. The number of children in each family was small, ranging from 1-5, with a mean of 1.8 (± 1.1). One patient had an illegitimate child and had been divorced by her husband for infidelity after 11 years of marriage. Another patient was separated from an alcoholic brutal husband; 3 patients described gross marital disharmony; and a further 3 patients gave evidence of significant marital incompatibility. In 2 cases the marital discord was due to severe psychological disturbance of the spouse;

in one, to an alcoholic psychopathic husband. Of those who exhibited a lesser degree of marital incompatibility a number related same to sexual disharmony, or to less marked neurotic or personality maladjustment in the spouse.

The degree of sexual disharmony which prevailed in the group was very considerable. Of 16 married patients, 9 described significant sexual incompatibility. In 3 patients, no sexual relations had occurred for over 10 years. The great majority of the married women had no pleasure in, or actively disliked, sexual intercourse. In one case the husband had refused intercourse since the birth of their only child, 14 years ago. In the other 2 patients who had abstained from marital relations for a prolonged period, the wife had taken this step after an unpleasant childbirth. Coitus interruptus was practised by 1 patient with a normal sexual relationship, and by several others among those sexually less well adjusted.

Of those with children 4 patients were grossly over-protective, and a smaller number less so. There were no significant factors in the health of the children other than 3 who exhibited early neurotic or behaviour disturbance. No children suffered from skin or allergic disorders.

The poor adjustment of the group in early life tended to be propagated, if to a lesser degree, into their adult relationships. Fifteen, (72%), of the 21 patients described life-long difficulty in the social sphere. They had always been timid, shy and reserved and mixed with difficulty. This persisted through their adult lives and was accompanied by considerable apprehension

of unusual events or of meeting new people. They disliked being the focus of attention and felt extremely embarrassed in such circumstances, even if in familiar surroundings. They tended to be extremely self-conscious, especially in heterosexual company, and all had blushed very easily all their lives. Of those who appeared to be somewhat better adjusted, all but one had always blushed easily and severely. In no case could the level of social adjustment be described as better than adequate.

Despite such maladjustments, a number of the group tended to sociable activities, although usually within a restricted circle only. In 5 cases the social maladjustment was of sufficient intensity to cut them off from even a restricted range of social activities. Three patients were members of sporting, political, or religious committees. They reported considerable apprehension, anxiety, and selfconscious embarrassment if they had to address such committees or in other ways play an unusually prominent role. On such occasions they always blushed severely.

The sexual adjustments of the group tended to be equally inhibited or immature. The married females as a rule tended to have had few heterosexual interests before marriage. In 4 cases they married 'childhood sweethearts' and had had no experience of other close heterosexual friendships. They were on the whole resistant to describing their sexual experiences and would blush furiously when so doing. The male members of the group displayed considerable sexual inhibition. Their pre-marital heterosexual activities had been significantly restricted, in keeping with their poor social adjustment, and none had had pre-marital sexual

relations. As husbands they appeared competent but not enthusiastic. Masturbation was either denied or guiltily admitted. In one case it was substituted for the wife's frigid non-acceptance of her marital duties. The one unmarried male, who was the most grossly maladjusted of all the patients, had pronounced homosexual trends and was extremely guilty about his past indulgences in this field. The females of the group displayed psychosexual immaturity as much as sexual inhibition. The unmarried either lacked heterosexual friendships or developed emotional and sexual relationships with married men. One married patient had continued an illicit sexual relationship for several years, her husband having denied relations to her since the birth of the child. The majority of the others were frigid in their marital sexual relationship. Many expressed their dislike of intercourse and their fear of further conceptions.

The attitudes of the patients to their parents, siblings, or marriage partners showed strong dependent trends. This was marked in 8 patients, 5 of whom showed a strong preference for the mother and 2 for the father. One patient displayed strong hostility to his father; another described fear of his father in childhood. A female patient was severely critical of her mother; two others were ambivalent in their attitudes to their mothers.

The health record of the group was on the whole good, apart from early childhood illnesses or minor functional disorders. A significant history of severe neurosis was found in 4 patients, and to a lesser degree in 4 other cases. Psychosomatic disorders,

were found in 4 patients. Two had peptic ulcers. Six patients had menopausal symptoms. Other illnesses noted were premenstrual tension states (2); non-menopausal menstrual irregularities, (2); mild myxoedema (1); severe organic illness (1).

Evidence of stress situations of adequate severity preceding the onset of the skin reaction was observed in 17 patients, (81%). They were related to the major exacerbations in 100% of cases. The stress which produced this disturbance was rarely an acute, major, traumatic episode, but more usually a situation of long-standing anxiety or emotional disturbance. An acutely disturbing stress situation did not usually produce a Rosaceous eruption immediately, but only after a short or long period of anxiety and emotional perturbation. In the 4 cases where no definite stress association was noted, information was inadequate in one. The Rosacea was of such long duration in another that a reliable assessment could not be made.

Situations associated with feelings of resentment or hostility were the most common related stresses, closely followed by disturbance in the marital relationship, and situations productive of anxiety.

In most cases a complex of factors was found, although in a group where personality maladjustment was of principal importance, environmental stress factors were not prominent. Anxiety over close relatives was mainly related to their behaviour or their implication in worrying situations, rather than to their health. A pathological degree of anxiety was shown by one patient in respect of an abnormally dependent relationship with a brother

with whom she lived. A very dependent, inhibited, male developed Rosacea when separated from his family by military service. Depressed and constantly homesick, the exacerbations of his skin condition were invariably related to an increase in the rigours of military life.

Despite the frequency of sexual maladjustment in Rosacea patients, in only 2 cases was this directly related to the onset of the condition. In one, grossly inhibited sexually, Rosacea appeared one month after the discovery of an unwanted pregnancy. During the intervening period the patient had been acutely anxious and apprehensive of this undesired birth. Pathologically immature and over-dependent she could not face the responsibilities of a child. In the other patient, the onset was related to the continued fear of exposure of an extra-marital sexual relationship.

Resentment or hostility where encountered in stress situations, was mainly directed against individuals in the immediate environment, particularly husbands or in-laws. One patient developed Rosacea after prolonged annoyance from his neighbour which kept him in a state of continued resentment. Another had a prolonged period of strife with a lodger before the skin reaction appeared. The stress situation in such cases was possibly of relatively minor degree but was long-continued, and produced sustained and often severe resentment, annoyance or anger. It is noteworthy that the majority of patients who displayed considerable resentment and hostility declared they flushed with anger.

Most patients did not easily express their emotions and therefore were unable to ventilate their resentments and hostilities.

On this background of brooding resentment, the Rosacea often appeared.

Among the many anxiety situations was in one case a period of prolonged stress relating to a libel action. Both litigant parties were work colleagues and friends of the patient, and as the most important witness, she was greatly disturbed by her invidious position. Following some months of exposure to this constant strain, the Rosacea eruption developed. A second patient developed Rosacea after prolonged anxiety related to a previous attack of threadworms. Some years before she had aborted a macerated foetus. Following the threadworm infection she developed an acute anxious guilty reaction that the foetus she had passed had been eaten by the worms.

The persistence of Rosacea was in many cases related to the continuation of the situational stresses already described, or to a development of same. In others it appeared to be related to their continued exposure to minor stress because of their personality maladjustment, or to the emotional disturbance created by a disfiguring facial lesion.

It was sometimes difficult to sort out precipitating factors in the exacerbations of Rosacea where the latter tended to occur frequently. The circumstances related to the exacerbations tended to be disregarded unless the latter was unusually severe. The usual description by the patients of precipitating factors, related them to variations of temperature; exertion; hot foods or spices; emotional disturbance; worrying situations; fatigue

anger; and pre-menstrual states. A number of precipitants were those which caused facial vaso-dilatation. Any unusual or marked emotional upset was often adequate to precipitate a flare up of the rash. One patient described how she would anxiously scrutinise her face each night for the first signs of an exacerbation or relapse. She tended to lie awake and worry about her face, and following many such occasions the rash would have flared up by morning. In some cases no obvious precipitant factors could be elicited but a state of protracted tension or anxiety was usually present.

The morbid self-consciousness induced by the rash appeared to be a potent source of emotional disturbance in most cases. The female patients in particular felt wretchedly depressed, inferior, and inadequate, and developed mild ideas of reference. This was particularly important in those whose work brought them into contact with the public. Even the cloistered housewife felt a similar reaction when answering the door to callers or in her daily shopping. Some patients expressed the fear that people would think they had an infectious disease. This was not general and the usual effect of the rash on the patient was mainly in the awareness of a facial disfigurement readily noticed by others. Two patients also described regular, well-marked pre-menstrual exacerbations of Rosacea.

The comparatively low incidence of individual stress factors pointed to the relative unimportance of environmental stress in this condition. The onset was usually related to an occurrence or situation of considerable stress intensity. Major

exacerbations invariably displayed a similar stress relationship. However, in most cases one was dealing with a persistent condition with episodes of minor aggravation. What seemed most important in Rosacea was not the emotional concomitants of the major exacerbations, but rather the reason why the condition persisted. One could only relate this to the state of persistent minor stress to which these patients were exposed by their personality maladjustments and the influence on some of the skin disorders.

The majority of patients were anxious, tense, inhibited, sensitive, and easily hurt. They were timid and lacking in confidence, especially in the social sphere. Their basic insecurity was in part reflected in their conscientiousness at work and obsessional traits of behaviour. They tended to be dependent and submissive, especially to those in authority, and lacked drive and assertiveness. The affective aspects of their personalities was on the whole severely constricted, and the patients markedly lacking in the spontaneous expression of emotion. They were inclined to worry excessively, particularly about their health and their social relationships.

It is of interest that gastric disturbance was directly associated with the attacks of Rosacea, in only one case. In others with a history of dyspepsia, the two conditions did not appear closely related.

Also of interest is that in three cases of erythrophobia studied, a pattern of reaction similar to the above was displayed. All were overprotected as children, two being the youngest in the family, and one an only child. As children they were timid and

insecure, mixed poorly, and two exhibited minor neurotic traits. Their subsequent adjustments were improved except all were socially and sexually inhibited. Blushers all their lives, this tendency became progressively intensified and they became morbidly self conscious of this reaction. The subsequent anticipation of blushing and the fear associated with same led to a further breakdown of their never robust adjustment. Two of the patients showed considerable drive which led to their establishing themselves as respectively, a chiropodist and a school teacher. The latter in particular attained some local renown as a political figure. This dominant interest was in great measure a compensation for his feelings of inadequacy, and a means whereby he could sublimate the heterosexual drives which because of his socially inadequate personality he could not satisfy. Coincident with the development of erythrophobia, which led to his withdrawal from the political scene, his sexual difficulties appeared to be augmented.

All three shared personality traits in which tension, anxiety, and emotional restraint predominated. Underlying sexual guilt was elicited in one case, but was absent from the others. The stress situations which precipitated the blush reaction were related to social difficulties. The exacerbations of blushing and the erythrophobia were associated with circumstances in which they were brought into prominence before the public or otherwise were made to feel embarrassed and self-conscious.

These three patients were derived from a much younger age-group than that usually encountered in Rosacea. It would be of considerable interest to see if, exposed to adequate stress in

later life, a Rosacea eruption would develop.

The striking feature of the Rosacea group was their marked emotional inhibition and constraint. In a large number of cases rapport was difficult to establish, and even subsequently information had literally to be extricated from them. This attitude was not confined to the interview situation, but appeared extended into their personal lives. With few people could they be at ease and relaxed. The personality maladjustment, particularly in the social sphere, appeared to be the principal abnormality in this group of patients. One felt they were continually under minor stress in all their interpersonal relationships. Always anxious, insecure and diffident, the effect of a disfiguring facial lesion on their morale can well be imagined.

This group of Rosacea patients has been described principally from the viewpoint of their stress associations. The importance of extraneous physical factors is also conceded, in their common ability to affect the facial vessels.

... of the ... of large ...
... to occupy a valuable position ...
... health was on the ...
... present in only 15% of ...

Urticaria (20 cases)

Average age - 38.9 years. Sex distribution, 12 female, (60%); 8 male, (40%). Married, 15 (75%). Average duration of skin condition, 4.7 years; average age at onset, 32.9 years.

The family history revealed a moderate incidence of disturbance of family background. Parental health was fairly good, although frank neurosis or neurotic trends was noted in 20% of the case histories. Illness of anxiety value in the parents was tuberculosis, (3 cases), and carcinoma, (2 cases). The only psychosomatic manifestations were asthma, in the parental histories of 2 patients.

Parental attitudes to the patients were considered faulty in 45% of cases, due to overprotection, deprivation of affection, or a rigid moralistic attitude which, among other things, tended to prevent the children mixing freely. The material background of the home was in general adequate, and in 30% of cases could be considered as above average. Only in one case was there actual poverty in the home. However, 25% of patients described their childhood environment as an unhappy one, mainly due to domestic strife or faulty parental attitudes.

Urticaria patients tended to come of large families, average 6.1, and to occupy a vulnerable position in the family unit in 45% of cases. Sibling health was on the whole good, and nervous disturbances present in only 15% of cases.

Neurodermatitis, (1); urticaria, (2); lichen planus, (1); and migraine, (1); were found in the siblings of 4 patients.

The attitude of the patient to the parent was considered

faulty in 25% of cases, two patients being overdependent, and three hostile. Of the latter, two were hostile to the parent of the opposite sex. Ambivalence to the mother was exhibited by one patient.

Patient-sibling relationships were on the whole good, with little rivalry, hostility, or dependency.

The early adjustment of the group was fairly normal, and although neurotic traits were found in 40% of cases, they were not marked. Similarly the early social adjustment could be described as faulty in 30% of cases, but only severely so in 10%. The latter two patients also displayed a faulty adjustment to school, mixing poorly and attending infrequently. The educational attainments of the group were average or above, other than in four patients who could be classed as poor scholars.

The childhood adjustments of the group were assessed as being significantly faulty in 5 patients, (25%), and of these, to a mild degree in all but 2 cases.

The adult adjustments tended to conform to a similar pattern, with relatively few abnormalities. Socially, urticaria patients were on the whole well adjusted, with a small minority, (30%), who experienced moderate or considerable social difficulty. Of these, the histories showed similar social maladjustment in childhood in most cases, and three of these patients were liable to blush easily and severely if embarrassed. In their pre-marital sexual relationships a number tended to be rather inhibited, but the majority had good heterosexual relationships. In two cases, repressed homosexual traits were queried but not

confirmed. The work records of the group were stable, although with a tendency not to stay too long in one employment. Their basic occupations were mainly of a semi-skilled type, such as clerical or office work, or as shop assistants. The occupation appeared of stress value in 30% of the group and involved considerable responsibility in 20%. In terms of the group in gainful employment, (15 patients), the amended incidence was 40% and 27% respectively.

Of the total group 75% were married, the mean duration being 19.7 years. The average number of children in each family was 2.1, but 26% of the married patients had no children. In this latter group, excepting for one case, the marriages were of long duration. A series of mishaps preventing conception was reported by two of these patients. The remaining 2 patients were loath to discuss their marital sexual relationships and it appeared that considerable maladjustment existed. A further 4 patients described significant marital sexual maladjustment, mainly due to their frigid or disinterested sexual attitude. One woman described intercourse as normal but claimed she avoided same as the urticaria was always aggravated afterwards. Significant marital incompatibility was present in 4 patients. The main difficulties appeared to derive from temperamental incompatibility.

The past health records of the group showed a significant history of neurotic disturbance in 25% of cases, all anxiety neuroses. Five patients exhibited psychosomatic disorders including peptic ulcer, (3); functional hypertension, (2);

migraine, (1); pre-menstrual tension states, (2). Three patients had a history of life-long dysmenorrhoea and one had menopausal symptoms. Two patients displayed marked phobic anxiety, mainly related to their health. Significant disturbance of health in the spouse or children was infrequent and appeared of no significance.

As a group urticaria patients appeared fairly socially inclined and in only 10% could they be described as being of solitary disposition. They were on the whole, anxious, tense, personalities who displayed considerable emotional lability, and were sensitive and easily upset. A number of them described well marked feelings of inferiority and inadequacy with a tendency to feel insecure and lacking in confidence. They were inclined to brood over upsets and were easily depressed. However, the majority of patients showed a comparatively robust type of personality with reasonable self-confidence, if on occasion insecure and inadequate. The greater number of patients were inclined to worry excessively, and particularly about their health. They tended to be dependent and submissive rather than driving and assertive. Their attitude to work was a highly conscientious one, at times almost pathologically so. On the whole they were fairly mature and adaptable personalities but a number were inclined to a more rigid, less adaptable, pattern of reaction.

The skin reactions of the urticaria patients were mainly phasic. In 4 patients the urticaria could be described as continuous in the sense that it was rarely absent. In 80% a

significant history of stress preceded the onset of the condition, and in 75% of cases this also could be related to the more severe exacerbations. In 2 cases, stress factors were not marked but social inadequacy was considerable and the urticarial attacks coincided with situations of self-conscious social embarrassment. Both displayed a personality and behaviour pattern similar to that found in Rosacea. In 40% of the patients, the urticaria appeared in a setting of a chronic anxiety neurosis or mild depressive illness. Two patients had associated neurodermatoses, namely lichen planus and general pruritus. In one patient with marked facial vasomotor lability, the onset of the urticaria was associated with a period of unusual exposure to heat as the fireman in a locomotive. The principal precipitant factors for the group were emotional disturbance, excitement, tension, and thermal changes, particularly heat. Exercise, fatigue, anger, hostility or resentment, and social embarrassment with blushing, appeared of lesser importance. The major life stresses related to the onset or exacerbations of the rash were various anxiety-provocative situations; anxiety or conflicts over close relatives; situations productive or implying feelings of resentment or hostility; guilt-provocative circumstances; and disturbed marital relationships. One patient developed urticaria following prolonged stress relating to a divorce action; another during difficult protracted negotiations to adopt a foster-child. One patient developed an acute anxiety state following the elopement and unsuitable marriage of a daughter.

The urticarial attacks first appeared in this setting. A young male, overprotected and pathologically health-conscious since rheumatic carditis at 14 years, exhibited episodes of acute anxiety usually culminating in an urticarial eruption. A married woman of 29, with a deprived unhappy childhood due to parental infidelity culminating in divorce, developed urticaria when her own marriage began to take a similar course. Her sister's marriage had already ended in the divorce court. Resentful against her husband and to her children whom she felt were turning away from her, constantly anxious and guilty as she felt the marital failure was due to her inadequacy, the urticarial eruption first appeared on this background of complex emotional disturbance. One elderly widowed lady developed attacks of urticaria whenever she argued with the sister who lived with her. The latter also exhibited urticarial attacks under similar circumstances.

Only 30% of patients related attacks of urticaria to feelings of resentment and hostility, and in such cases the usual precipitants were the more general factors already described. However, 45% of patients displayed a stress reaction to a situation where hostility or resentment was overt or implicit. These feelings were usually directed to individuals in the immediate environment and included mainly children, spouse, or relatives by marriage. Hostile feelings to children were aroused by specific stressful situations and did not typify the accustomed attitude of the patient to the child concerned, or to other children. Work stress was a factor in

25% of patients; in only 2 patients was this prominently displayed. In one patient with a history of highly traumatic experiences in a concentration camp with associated guilt, the latter proved of little aetiological significance in the onset or exacerbations of urticaria which were mainly related to marital discords and resentments.

While the onset in the great majority of patients was related to acute or prolonged stress, in some cases further episodes of urticaria appeared to occur in situations where stress was denied. However, in such circumstances heat, fatigue, or exertion were usually associated with the eruption. One patient, with urticaria from 2 years of age, sometimes awoke in the morning, for no obvious reason covered with urticarial wheals.

Specific psychopathological patterns were not easily defined. Of these, conflicts related to hostility or resentment situations seemed of the most importance. The majority of patients when first seen displayed symptoms of an anxiety reaction but in few cases was this severe.

The personality structure in urticaria varied considerably within what might be considered the normal range. Probably the main characteristics of the group were their low threshold to anxiety and worry, and their emotional lability, with the tendency to react excessively to environmental stress. In some cases attacks of urticaria were associated with the suppression of such emotions; in others, with their violent expression.

No consistent patterns of personality or emotional disturbance could be made out in this group. Resentment, while

a prominently associated emotion, was by no means generalised throughout the group.

[illegible]

The family unit of hydrostatic pressure varied
slightly, and the pressure required to maintain
slightly, and the pressure required to maintain
slightly, and the pressure required to maintain

Dyshydrosis (24 cases)

Average age 39 years. Sex distribution, 16 male, (67%); 8 female, (33%). Married, 67%. Mean duration of skin condition, 7.6 years; average age at onset, 30.2 years.

The family background was significantly disturbed in 42% of patients, mainly due to domestic strife. The premature death of one parent was reported in 21% of cases, in all but one case the demised parent being the father. The presence of faulty parental attitudes was less frequently noted than in Rosacea and urticaria, the incidence being 34%. The father of a patient with severe hyperhidrosis, also had a similar condition. Tendency to neurotic disturbance in the parents was not marked, (21%), and the only psychosomatic manifestations were asthma, (1 case), and peptic ulcer, (1 case). Among the parental illnesses associated with anxiety in the patient's mind were the death of the mother in childbirth and both parents dying of cardiac disease. The material background of the home was in general adequate or better, and 96% of the patients were happy in their childhood environments.

The family unit of dyshydrotic patients averaged 4.1 children, and 62% of the patients occupied vulnerable positions. Sibling health showed no marked abnormalities and the incidence of neurotic and psychosomatic disturbance was akin to that of the other groups, at 17% and 8% respectively. Psychosomatic ailments were peptic ulcer, (1 case), and functional hypertension, (1 case).

Faulty attitudes to the parents on the part of the patient

were noted in 42% of cases. Of these, hostility to a parent, usually the father, predominated. Relationship with siblings, however, appeared excellent.

The childhood adjustment of the group could be assessed as adequate or good in 83% of patients. In only 17% of patients was the adjustment moderately faulty. Thus, although 46% of cases exhibited neurotic traits in childhood, in no case were these marked. School and social adjustment was on the whole normal and a grammar school or higher education was found in 33%.

The subsequent adult, social, and work adjustments were similarly good. Some 21% reported moderate difficulty in social relationships. The work records of the group were exceptionally stable in 34% and of average stability in a further 54%. The basic occupations of the group were rather distinctive in containing an unusually high number of individuals in professional or executive posts, (42%). These included nurses; a surveyor; the personnel manager of a large firm; departmental managers of industrial organisations or large stores; and the manager of a large, very busy, shop. In terms of their basic occupations and school records, the intellectual endowments and work abilities of the dyshydrotic group appeared rather above the average found in neurodermatitis patients. As would be anticipated, work responsibilities and stresses were prominent in this group. In terms of those in gainful employment, 60% reported stress factors in work and 50% a considerable degree of responsibility. The occupational

stress factors were mainly those related to responsibility, although difficult interpersonal relations were described by two patients.

The pre-marital sexual adjustment of the group appeared fairly normal, and most freely discussed their heterosexual relations. One patient, a frustrated spinster with a guilty sexual relationship, showed fairly severe sexual maladjustment. The greater proportion of the group were married, for an average duration of 12.7 years. Of these, 19% had no children, and the others averaged 1.8 children per family. Marital incompatibilities were not marked. Sexual disharmony in the marital relationship was not uncommon. It took the usual pattern of sexual frigidity of the spouse, but 2 male patients described prolonged impotence on their part. In each case this was associated with a frigid wife, and the presence of a chronic anxiety neurosis. Faulty attitudes to the children were not marked.

A significant number of patients, (29%), revealed a past history of frank neurotic breakdown. An equally large number revealed pathological anxiety symptoms in their past lives, although not amounting to frank neurosis. All neurotic illnesses were anxiety states. The incidence of psychosomatic illness was low, 2 patients being affected by peptic ulcers and one by functional hypertension. Phobic anxiety, venereophobia, was exhibited by one patient. The health records of the spouse showed a moderate incidence of neurotic disturbance, psychosomatic illness, and chronic ill-health. In a small number of

cases these were potent stress factors to the patient. The incidence of sexual maladjustment in the spouse was assessed at 19% of the married group, but this is accepted as a low estimate in view of the difficulty in obtaining information. In 19% of the married patients, one or more children exhibited functional nervous disturbances.

The dyshydrotic group appeared essentially sociable in their interests and 71% could be considered normal in this respect. They were almost all anxious, tense, individuals considerably given to worrying and highly conscientious or over-conscientious in the employment sphere. The larger proportion tended to be easily depressed and the majority described themselves as sensitive and easily upset. A considerable number tended to control their emotions and found difficulty in expressing same. A number were inclined to brood excessively over slights. Feelings of insecurity, inadequacy or inferiority were reported by many, but these were rarely marked. The majority showed adequate self-confidence and could be described as adaptable, reasonably mature, individuals. Rigidity of personality was uncommon, and high moral standards of behaviour tended to be restricted to their employment interests. While some showed submissive dependent traits, the majority were driving assertive personalities who willingly accepted responsibility. Obsessional traits of minor degree were a common finding. In general they tended to be tense, hard-working individuals who found difficulty in relaxing.

The skin reactions were in the main continuous with

exacerbations. Significant stress relevant to the onset was found in 83% of cases, and related to major exacerbations in 100% of the patients. Stress derived from a chronically anxious, tense, worrying personality seemed of major importance in 5 patients. The dyshydrotic reaction appeared in a setting of chronic anxiety neurosis in 5 patients. The association of hyperhidrosis and cheiropompholyx was common, but by no means invariable. A small number of patients described only persistent hyperhidrosis; a lesser number a pompholyx reaction with no history of excessive plantar or palmar sweating. In 2 patients a clear description was given of the sudden cessation of palmar hyperhidrosis immediately before the appearance of a pompholyx eruption and the gradual return of the former as the rash cleared. Other associated skin reactions were seborrhoeic dermatitis, (1 case), and eczema, (2 cases). In 42% of cases the dyshydrosis was preceded by previous trauma to the skin in the affected area. In many cases they had initially been diagnosed as a contact or occupational dermatitis, with the subsequent closely associated appearance of hyperhidrosis or pompholyx in the area. One patient described hyperhidrosis of the palms following a slight burn from a spilled acid bottle in a school laboratory. Subsequently if the patient placed his hand near, or attempted to pick up a reagent bottle, he felt his hands tingle and they would perspire excessively. Plantar hyperhidrosis did not appear until 3 years later, and followed closely upon a highly traumatic experience when awaiting an abdominal operation. Ultimately, the hyperhidrosis became

established as an invariable response to anxiety-provoking situations. A number of patients described how they feared contact dermatitis before it appeared. One patient handling bags of cement exhibited considerable apprehension of possible dermatitis from the crude cement as had been incurred by some of his workmates. He subsequently developed a cement contact dermatitis followed by cheiropompholyx. In another case, anxiety over a contact dermatitis was engendered by the knowledge that same had persisted in workmates for many years. Hyperhidrosis and pompholyx soon supervened.

The important precipitant factors were emotional disturbance; excitement or tension; worry or anxiety; hostility or resentment; and social embarrassment. The latter tended to occur in those with continued hyperhidrosis who were morbidly self-conscious of same. They worried that people with whom they shook hands would notice this palmar hyperhidrosis.

The principal life stresses related to the onset or exacerbations of the skin reaction were, occupational; fears or conflicts over close relatives; resentment or hostility provocative situations; or other situations productive of anxiety. The occupational stresses were generally non-specific in the sense that they were essentially derived from the responsibilities of the employment. The patients happily accepted this responsibility but were always conscious of same and endeavoured to give of more than their best. They frequently continued their work at home and their leisure interests were subordinate to such work. Relaxation was difficult for them

and they preferred a continually active role. One patient managed a busy large hardware shop and spent his weekends running an extremely big newspaper round. They rarely complained of fatigue, but were constantly tense and on edge and slept poorly. In a smaller number, the skin reaction followed a potentially dangerous accident at work or an occupational dermatitis. They experienced subsequent anxious apprehension when returned to work and a dyshydrotic reaction supervened. In a few cases, occupational and other factors were intermingled, as in the case where an occupational dermatitis necessitated prolonged absence from work and by increased proximity aggravated a chronic marital incompatibility. Anxiety or conflicts over close relatives usually involved the health of wife, child, parent or sibling. One patient developed pompholyx following the death of her mother on whom she was excessively dependent. Another patient derived considerable stress from a chronic invalid wife and a cardiac invalid son. In a third, the main stress was the fear of conception, the wife having a rheumatic endocarditis with decompensation, and further pregnancies being contraindicated. Resentment or hostility was usually directed against persons in the immediate environment such as in-laws or spouse. A patient, whose mother died at her birth, felt resentment to the father with whom she resided, for his reproachful critical affectionless attitude to her. She could not express this resentment and when the latter was aggravated, her hands tended to break down. Two patients described intense hostility to a paranoid mother-in-law and

resentment to their wives for excessive dependency on the mother. In a case already mentioned, hostility to the wife was aggravated by a prolonged stay at home due to a contact dermatitis. One patient admitted intense hostility to his stepfather, and attacks of hyperhidrosis if he thought about him, especially if in church. Another patient, an ex-WAAF officer frustrated in her domestic environment, developed attacks of pompholyx in a setting of marital disharmony and hostility to her husband. Each attack occurred after the birth of her children and latterly persisted when the hostility to her husband became seriously aggravated.

Resentment or hostility was rarely found alone as precipitating a dyshydrotic reaction. Usually anxiety or non-specific stress of varying sort was associated with same. Thus several patients described resentment or hostile feelings, but declared their skin only flared up if they felt excessively tense, anxious, or excited. Many stated that when tense or excited they felt their hands or feet tingling, and an exacerbation of their rash would often develop.

Expressed guilt, or guilty situations, were infrequently observed. In only 2 cases were these considered of considerable aetiological importance. One was a Salvation Army officer with occasional sexual dalliance and masturbation guilt; the other, a patient who felt guilty to her father for the death of her mother in childbirth. In these cases, and others where guilt was explicit or implicit, the emotion of guilt in itself would not precipitate a dyshydrotic reaction, but only if it was

associated with a severe degree of anxiety or emotional upset.

Other anxiety-provocative stresses were many and varied. One patient who had come down in the world from an executive post to an uncongenial clerical job, disliked his employment intensely and could not solve the conflict between his desire to move and his ageing need for security. A patient with chronic dyspepsia was diagnosed as having a peptic ulcer, and following his excessive worry over the latter and its implications, a severe pompholyx reaction developed. Another patient with axillary hyperhidrosis, whose work uniform included an uncovered white blouse was morbidly self-conscious of the axillary sweat staining. Her hyperhidrosis was much more severe at work than if at home. Another unintelligent girl, described several discrete attacks of pompholyx each associated with the dissolution of a different love affair. The manager of a food canning factory, with a minor residual pompholyx eruption, worried excessively each time he had to show visitors round the plant in case they noticed his hands and thought same due to infection. After such visits his hands would usually erupt.

Psychopathological mechanisms in dyshydrosis do not appear as important aetiologically as non-specific stress and anxiety. Their main importance lies in relation to resentment and hostility feelings and to a lesser extent in the production of guilt.

The predominant impression of the dyshydrotic group was of fairly normal personalities predisposed to anxiety and tension, and exposed to stress of a non-specific nature. The latter was

mainly derived from their conscientious attitudes to their employment; the more responsible positions gained by them because of their drive and superior intelligence; and their low threshold for anxiety. Anxiety was the emotion predominantly associated with dyshydrosis.

Pruritus ani (21 cases)

Average age, 39 years. Sex distribution, 17 male, (81%); 4 female, (19%). Married, 16 patients, (76%). Average age at onset, 32 years; average duration, 6.7 years.

Evidence of a disturbed family background was found in 43% of cases, mainly related to family discord. Faulty parental attitudes were reported in 53% of patients. Deprivation and overprotection were equally common and the incidence of a rigid, punitive, or strictly religious home environment not inconsiderable. The incidence of neurotic disturbance, neurodermatitis, and psychosomatic illness in the parental histories was fairly marked. The neurodermatoses were urticaria (1), neurodermatitis (1), and pruritus ani (1). Psychosomatic ailments were migraine, (1), peptic ulcer, (2), and asthma, (2).

The average size of family was 5.4 children, with 49% of patients in vulnerable family positions. Sibling health was on the whole good, but with a fairly high incidence of neurosis or neurotic trends. The material background of the home was usually adequate or good and the childhood environment a happy one in all but 4 patients.

The attitude of the patients to their parents tended to be a hostile or ambivalent one and 48% displayed faulty child-parent relationships. The hostile reactions were often associated with the withholding of affection or frank rejection on the part of one or both parents. Sibling relationships, however, seemed normal.

The childhood adjustments of the group showed 39% with neurotic traits; 24% with faulty social adjustments; and 10% who adjusted badly to school. Neurotic traits when present tended to be marked. In general, 34% of patients were considered to have a faulty childhood adjustment, but only markedly so in 2 cases.

The educational records of the group displayed average or above average ability. Their subsequent work records were in keeping with this, a high proportion of the group being skilled workmen. Only one patient worked in an unskilled capacity. Their work records

were normally stable with a high proportion who tended to stay in the one employment for the greater part of their working life. Their jobs were on the whole not responsible ones and only 24% of the group described their occupations as stressful. The stress was derived from disturbed interpersonal relationships rather than the nature of the occupation in itself.

The social adjustment of the group tended to be fairly good, although 38% reported moderate difficulty in social relationships. In keeping with these findings was the preponderant tendency to normal social interests. Pre-marital sexual relationships appeared normal in the majority of patients and in only two was sexual maladjustment marked. One patient was an overt practising homosexual. In two others, the history suggested homosexual trends but these were not confirmed. A further 3 patients described mutual masturbation with other males during early adolescence but their subsequent sexual careers indicated normal heterosexual trends. These patients denied any undue interest in homosexual activities and described the incidents of mutual masturbation as inspired by curiosity and associated with heterosexual phantasies.

The 16 married members of the group had been wed for an average of 16.8 years. Significant marital incompatibility was described by 5 patients and sexual disharmony was present in 50% of the group. Frigidity in the wife appeared common, but a number of male patients also complained of diminished libido or impotence. This was particularly marked in those with a long history of chronic anxiety or where other marital incompatibility was present. In no case was evidence of homosexual trends elicited in these males. The married group had an average family of 2.4 children and 19% of the marriages were childless. Attitudes to their children were normal, other than in one patient who resented their position in the mother's affections.

The health records of the group showed an unusually high incidence of frank neuroses, (53%). These were invariably chronic anxiety states and a number of patients had been attending the

psychiatric outpatient department for this complaint before the pruritus ani was reported. Phobic anxiety was a marked feature of this disturbed psychiatric state. This included phobic fear of cancer, usually rectal or bowel, (5 patients); venereophobia, (4 patients); and threadworm infestation, (2 patients). The latter had both had an acute attack of threadworms, and insisted that they still harboured and passed same, despite all evidence to the contrary. Psychosomatic illness was confined to the digestive tract, as stress dyspepsia, (2), and peptic ulcer (2).

The health records of the spouse revealed no significant trends other than sexual maladjustments in 31%. Their children appeared normally healthy.

Patients with pruritus ani were on the whole anxious, tense, personalities, insecure and inferior, and lacking in self-confidence. They worried excessively, were easily hurt, and tended to brood over slights. They were emotionally unstable, and in most cases were able to exteriorise their emotions fairly adequately. They mixed reasonably well but in a number of cases interpersonal relationships were not good. A number displayed overt hostility; in others it was apparent but suppressed. Assertiveness and drive were not marked, but on the other hand, few could be described as submissive or dependent. As a group they tended to be introspective and to be health-conscious to an abnormal degree. Obsessional traits were not uncommon. Hysterical features were not in evidence. Their personalities on the whole tended to be rigid with a poor ability to adapt to changing circumstances.

The pruritus ani was continuous with exacerbations in 76% of patients. Significant stress preceding the onset was found in 90% of cases. Primary personality maladjustment was fundamentally important in 5 patients, and the pruritus occurred in a setting of an active anxiety state in 8 patients. The principal precipitant factors were emotional upsets; worry or anxiety; heat; excitement or tension; and feelings of resentment or hostility. Associated

neurodermatoses present in 9 patients, included localised neurodermatitis of buttocks, perineum, or scrotum (6); dyshydrosis of hands, (3), and psoriasis (1).

The principal related stress factors were anxiety over personal health; occupational stresses; sexual difficulties; and particularly situations productive of resentment or hostility. The targets of hostile feelings were often parents, especially the father, and particularly where the latter had been lacking in affection and understanding in the patient's childhood. One patient, a bus conductress, developed attacks on pruritus and associated with periodic intense feelings of resentment to the passengers which she was unable to ventilate. These may have been a projection of the resentment she experienced when a stepmother recently usurped her position in the father's affections and home. In another case the patient was jealous of the intimate relationship between his wife and children, into which he, separated from them for many years in the war, could never enter. He felt outwith the family circle, and adopted a resentful, critical, attitude to his children. He chose to work away from home and his pruritus was usually intensified on his return there, to ease off after his departure.

In a number of patients hostility was focussed on their work-mates, whom they felt tended to slight them or 'pick' on them. Wives were also a source of resentment, especially where frigidity or impotence were present. The hostility in most cases was overt, but in a number was suppressed although easily identified clinically as well as implicit in the stress situation.

Obsessional preoccupation with health matters was frequently encountered. It was common for the patient to relate the pruritus to suspected haemorrhoids, the latter believed by many to be directly pre-carcinogenic. In others the localisation of the pruritus aroused latent fears of rectal cancer, often inspired by the deaths of relatives or friends from this cause. A patient who worried about cancer of the prostate linked this up with venereophobia and masturbation guilt. The anxiety regarding threadworm

infestation observed in 2 cases was associated in both with pronounced marital sexual disharmony. Anxiety about the infestation was great, and their fears adhered to with delusional intensity.

It is of interest that a third case, not included in this series, with similar threadworm anxiety and sexual maladjustment, suffered from a severe Resacia as well as pruritus ani.

Two patients developed an anxiety state following severe physical illness and associated with the fear of recurrence. The pruritus in both cases waxed and waned parallel with the degree of anxiety felt by the patient. Phobic anxiety of venereal disease was fairly common but it was usually a long-standing symptom of a chronic neurosis and did not appear directly related to the pruritus.

The overt expression of guilt was infrequent. However, a certain amount of guilt was probably implicit in the many hostility situations. Guilt over homosexual activity was present in 1 case. Guilt related to impotence or diminished libido was not common. The impotence or poor libido tended to act rather as aggravating sources of anxiety to the patient and to reinforce his fears concerning the state of his health. One female patient developed pruritus ani in a setting of hostility to the mother and overattachment to, and identification with, the father who also had pruritus ani. The precipitating factors were anxiety over her studies, and her impending marriage with its implications to the parent-child relationship.

Despite the many cases where complex psychopathological mechanisms could be identified, other cases of pruritus ani appeared to occur as a simple association of an acute or chronic anxiety state. As the anxiety state improved the pruritus would disappear, to return as the anxiety symptoms recurred. No more specific relationship than that could be defined.

Once pruritus had been established, it tended to undergo exacerbation with simple non-specific stress, or in many instances, with no obvious stress association. A number of patients displayed an obsessional preoccupation with the pruritus. They seemed always aware of it and continually noting its degree of intensity. When

they retired to bed they anticipated being awakened by the irritation, and usually were, to sleep peacefully after the ritualistic application of a salve. The morning would bring immediate thoughts of their affliction and a ritual was laid down for each day to prevent rubbing of the clothes on the area, or to sit in a certain way to avoid undue pressure on the site of irritation, or similar manoeuvres. Thus the pruritus was the centre of an elaborate obsessional pattern of behaviour. The majority of patients, however, were relatively untroubled by the pruritus during the day. It was almost invariably worse at night in bed. Coitus, in 2 cases, tended to precipitate attacks. In 2 patients the related scratching was described as being almost pleasurable and of an ill-defined sexual quality.

Despite the very considerable preponderance of hostility and resentment in the life situations and attitudes of the pruritus patient, the onset and exacerbations tended to occur against a background of precipitating anxiety. Situations which tended to aggravate these hostile feelings did not necessarily exacerbate the pruritus. However, situations productive of severe anxiety almost invariably did so.

In general, the cases of pruritus ani tended to fall into two groups. On the one hand were those where the pruritus was part of a simple anxiety reaction; on the other, patients where the skin disorder was associated with complex psychopathological disturbance. The personalities and backgrounds of the latter group tended to show a greater degree of maladjustment than the former. On the whole, however, personality and background features in pruritus ani were not grossly abnormal. The predominant emotional disturbances appeared to be anxiety and hostility. Marital sexual discord was common, but homosexual trends rarely encountered.

Pruritus Vulvae (14 cases)

This group was composed entirely of married women with an average age of 41.4 years. They had a history of pruritus vulvae for 4.2 years, (mean), the average age at onset being 37.3 years.

Their family background showed a fairly marked incidence of domestic strife and chronic ill-health of the parents. The incidence of faulty parental attitudes was high, 64%, overprotection predominating. A high incidence of rigid, strictly religious, or highly moral family backgrounds was also noted. The parental health revealed no major abnormalities.

The average family group was 4.6 children. The material comforts of the home were usually good rather than adequate and in no case were these lacking. However, 28% of patients described their childhood as unhappy, mainly due to the highly moralistic, narrow, atmosphere of their home, or to domestic strife. A substantial proportion of patients, 63%, occupied vulnerable positions in the family. Sibling health was reasonably good with a low incidence of neurotic disturbance.

The personal history of the patients revealed a significant incidence of faulty child-parent relationships, mainly due to the overdependency of the patient and hostile feelings frequently directed to the mother. The basis for this latter often lay in the preference of the mother for another sibling, usually a brother. This was reflected in the sibling rivalry and open hostility exhibited by 4 patients. Neurotic traits in childhood were present in 63% of cases, and were often of fair intensity. However, social adjustment in childhood while commonly faulty was rarely severely so. School adjustment was deemed poor in 3 patients, and in general 64% of patients were considered to show significant faults in childhood adjustments.

The educational attainments of the group were mainly of average standard and their subsequent basic occupations principally of a semi-skilled type. A significant number entered unskilled

occupations, possibly reflecting as much the occupational opportunities for females as their level of intelligence. Their work records were very stable and only 3 patients described significant stress in their basic employments. A number of the group continued to work after marriage.

The social adjustment of the group was not entirely good and included a majority, 57%, who experienced moderate difficulty in social relationships. In their heterosexual relations they were inhibited or immature. These abnormal patterns of behaviour tended to be displayed by those with a history of faulty relationships with their parents and poor childhood and subsequent adjustments. The association of abnormal heterosexual attitudes with a rigid moralistic upbringing seemed significantly high.

The average duration of marriage was 14.9 years. The incidence of marital incompatability did not appear high, but that of marital sexual maladjustment was considerable, at 64%. These patients described lack of interest in, or dislike of, sex relations. Following the onset of pruritus, sexual intercourse ceased or became extremely infrequent, as the act was painful to the patient and the pruritus was often aggravated after coitus. One patient complained of dyspareunia present since marriage. Of considerable interest was the fact that 57% of the married patients had no children, the remainder averaged 2.7 children to each family. The parental attitudes to their children tended to be over-protective.

The health record of the group was not good, as 43% had a history of frank neurotic breakdown. This took the nature usually of an anxiety state with complaints of somatic dysfunction, and in a number of cases, with considerable hysterical overlay. Others could be described as chronic hysterics. Those patients who were lacking in a history of frank neurosis yet showed evidence of considerable disturbance of a neurotic type. The incidence of psychosomatic illness was low, 14%. A history of dysmenorrhoea

- 115 -

and menstrual irregularities was a common finding.

No significant abnormalities were noted in the health of spouse or children.

Patients with vulval pruritus tended to normal social interests, if in some cases these were somewhat restricted. They could be described as anxiety-prone individuals, inclined to worry excessively. The majority were insecure and dependent, and the predominant reaction pattern that of submission and suppressed hostility. Tension was of varying degree and although a number were prone to control their emotions and brood excessively, others appeared to find no difficulty in expressing same. They tended to be sensitive and easily hurt and depressed. Inferiority and inadequacy feelings were frequently expressed and self-confidence was generally low. In their work capacities they were highly conscientious. A number appeared to be abnormally health conscious with a long history of minor functional disturbance and phobic anxiety related to health. In general they tended to be rigid personalities with poor adaptability. A number of them could be fairly described as immature. Hysterical traits of personality were common, and obsessional traits not uncommon.

The pruritus could be described as continuous with exacerbations in 79%. A significant stress relationship to the onset of pruritus and to the exacerbations was observed in 86% of patients. In 28% the personality maladjustment was the main source of stress while in 50% the pruritus appeared in a setting of frank neurosis. The principal precipitant factors were described as worry and anxiety, emotional disturbance, and heat, in order of frequency of incidence. A history of associated skin disorders was very common, These included localised neurodermatitis, (3); pruritus ani (1); localised pruritus (2); psoriasis (1); and glossodynia (1). Relevant local trauma was found in 3 cases in the nature of cervical erosion with discharge, or other local abnormality. The pruritus begun or persisted after the local lesion had been eradicated.

114

The principal life situations related to the onset or exacerbations of the pruritus were encountered in the field of marital difficulties, sexual and otherwise; anxiety over personal health; and situations provocative of hostility and resentment. Conflicts related to close relatives, particularly parents, and other anxiety-productive situations, were of lesser aetiological importance.

The marital difficulties were infrequently those of incompatibility and discord. Rather they related to a frigid dislike of sexual relations or to the fear of conception. The pruritus in many instances began during or after some gynaecological disturbance or operative procedure. One patient developed vulval pruritus after hysterectomy for fibroids, and marital sexual relations formerly unsatisfactory to her subsequently became painful. Cervical erosion and discharge with its accompanying fear of carcinoma of uterus, acted as a potent precipitant in some cases. Vulval psoriasis, (non-irritant); hyperhidrosis, with intertrigo in the genital region; and an undiagnosed vulval swelling, all were associated with the onset and persistence of pruritus in individual cases. Repeated spontaneous abortions; a still-birth; the birth of an unwanted child; difficult labours; all seemed associated with the pruritus, linked to the fear of further conceptions. In many instances the pruritus appeared against a background of resentment and hostility. In one case this was directed against a deteriorating senile mother living with an obsessional house-proud patient. In another an unjustified accusation of immoral behaviour by her parents-in-law, followed by a spontaneous abortion, was succeeded by persistent feelings of resentment and hostility to the husband and parents-in-law, and the development and persistence of pruritus vulvae. Another patient was very resentful at having to look after 7 ailing relatives, all of whom lived in her home. Against this background pruritus vulvae developed. Prior to its onset she had severe functional headaches. In the

intervals of freedom from pruritus she had functional dyspepsia.

Three patients had a long history of functional nervous disturbance and could be clinically diagnosed as chronic hysterics. In others the reaction to the pruritus was so bland and lacking in true concern that a firm diagnosis of conversion hysteria could almost be made. Most patients expressed no guilt about their disturbed sexual relations, and their description of the husband as 'sympathetic', 'kind', or 'understanding' in not pressing sexual intercourse, was almost pathognomonic.

Phobic anxiety relating to health was found in 43% of patients. These fears included uterine or other cancer, (3); cardiac disease, (3); venereophobia, (1); and fear of infection (1). Many displayed chronic anxiety of various sorts and the exacerbations of pruritus tended to be most closely associated with domestic situations causing anxiety or worry. One patient developed pruritus after a frustrated sexual assault. She was six months pregnant at the time and feared the child would be abnormal when born. She was one of the few patients who described sexual relations as satisfactory, but she also feared another pregnancy and the pruritus was invariably worse after coitus. Another patient had to look after a senile father, schizophrenic brother and paralysed mother, in addition to caring for her own home. The pruritus developed in relation to this cloud of resentment, anxiety and guilt. She, as with several other patients, could distinctly relate the intensity of the pruritus to her state of anxiety or emotional disturbance. When she felt well the pruritus was minimal or absent.

In the majority of cases more than one aetiological factor was simultaneously active to produce the onset or exacerbation of the vulval irritation. Thus commonly one found resentment, hostility, anxiety and sexual maladjustment or other factors, all intermingled in the one case. Guilt was never prominently displayed although in a small number of cases it was implicit in the associated hostility situation. The main themes which

appeared to underlie the pruritic reaction and to be developed in the psychopathology, were the sexual maladjustments, conflicts over situations productive of resentment and hostility, and chronic anxiety often phobically related to health.

In general, pruritus vulvae tended to be associated with immature, maladjusted, personalities with a low tolerance to anxiety. The cases fell predominantly into two groups; the somewhat better personalities with an anxiety reaction, and the more maladjusted cases of hysteria.

Other Pruritus (10 cases)

This miscellaneous group of idiopathic pruritus included all cases where the primary symptom was not localised to anus and vulva. It included 4 cases with pruritus of the face and scalp, 1 with pruritus of chest, and 5 with generalised pruritus. Several of those with localised pruritus sometimes complained of generalised itch. Vice versa, the generalised group also at times described severe localised pruritus. Thus no further attempt was made to classify such cases, other than to distinguish them from ano-genital pruritus.

The mean age was 45.4 years. Sex distribution, 6 male, (60%); 4 female, (40%). Six patients, (60%), were married. The average age at onset was 41.2 years; the mean duration, 4.2 years.

The family background of these patients was similar to that of other forms of pruritus already described. The incidence of significant family disturbance was 30%, while 50% of cases revealed faulty parental attitudes. Parental health showed a comparatively high incidence of frank nervous illness, and in 2 cases one or both parents were psychotic. The average family size was 5.6 children. Five patients occupied vulnerable family positions, two being reared as the virtual only or youngest child. Other factors in the family background revealed no gross abnormality, but 40% of patients described their childhood environments as unhappy.

The personal histories revealed a small amount of dependency and hostility to the parents. Sibling relationships were fairly normal. The childhood adjustment was considered faulty in 60%, and neurotic traits were prominent in the group. The academic records, basic occupations, and work records of the group were indicative of an average intellectual endowment and a good adjustment to work. Work stresses appeared of significant importance in 50% of patients. These were of a general type and included poor interpersonal relationships, undue responsibility, frustration in promotion, and in the case of one miner, fear of returning to employment underground. Adult social adjustment was also not good in 5 patients, and severe difficulty was reported in 2 cases, A considerable amount of pre-marital sexual maladjustment was also encountered, this being severe in 3 patients. In one patient the history was strongly suggestive of repressed homosexual trends.

The 6 patients who were married had been so for an average of 22.1 years. Two patients had no children, the average family in the married group having 1.3 children. ^{THREE} ~~One~~ patients complained of considerable marital sexual maladjustment. One, with severe sexual maladjustment before marriage, exhibited subsequent ejaculatio praecox. Following the birth of their only child, sexual relations ceased and had not been resumed in 30 years. Subsequent gratification by masturbation with severe guilt and conflicts over religion ensued. The other patients with sexual maladjustment were frigid females, always inhibited in their sexual attitudes.

The health records of the group revealed a fairly high incidence of frank neurosis (40%). One patient had a peptic ulcer. Their personalities were not greatly different from those already described for pruritus ani and vulvae. They were probably even more tense, anxious and insecure with well marked feelings of inferiority and inadequacy. Hypochondriacal preoccupation with bodily functions was prominent. Hysterical features were little in evidence but obsessional traits prominent.

The skin reaction was of a phasic nature in 50% of cases. Significant stress factors related to the onset of the pruritus were found in 60% of cases, and relevant to the exacerbations in 40%. The reason for this relatively low stress incidence was probably related to the degree of stress derived from personality maladjustment and the fact that the pruritus in half the cases occurred in the course of a neurosis. The latter features were again those of a chronic anxiety neurosis with a considerable hysterical overlay in some cases. The principal precipitant factors appeared those associated with increased anxiety or worry. Associated psychogenic skin reactions were seborrhoeic dermatitis, (1), and axillary hyperhidrosis, (2). One female patient complained of intermittent pruritus vulvae but this was of secondary importance to a long-standing generalised pruritus.

The principal associated life stresses were those concerned with anxiety over personal health; occupational stresses; hostility and resentment situations; and sexual difficulties.

As with other forms of pruritus, more than one stress situation and its associated emotions were usually intermingled in individual cases. Following a highly traumatic accident at work, a miner, severely maladjusted socially and with marked sexual inhibition and guilt, developed generalised pruritus associated with the act of urination. Phobic anxiety of venereal disease, with associated sexual guilt, and increased difficulty with social adjustment aggravated the condition, and led to parasitophobic type of fears of infecting others. A patient, grossly maladjusted sexually, developed pruritus of the chest wall, against a background of progressively increasing work stress and difficulty in coping with his sexual problems. Suppressed hostility to the wife, and sexual guilt were prominent features. The pruritus appeared to have strong masturbatory associations. Two more patients developed pruritus of face and scalp in relation to occupational frustrations. One, an obsessional over-conscientious foreman, worried excessively over his responsibilities, aggravated by inadequate incompetent assistance. The second, chronically discontented in his employment, was continually frustrated in his ambitions for promotion. In both cases, the pruritus occurred in a setting of an anxiety state and its intensity and exacerbations paralleled the degree of anxiety. Overthostility, directed to the relevant individuals in their employments, was considerable. A female patient developed generalised pruritus and intermittent pruritus vulvae in a setting of critical hostility to her husband and severe anxiety related to the possible complications of an illness which

she had recently suffered. Marital sexual disharmony was prominent. The main complaint was generalised pruritus which waxed and waned with the degree of anxiety expressed by the patient. Another patient displayed symptoms of a chronic anxiety state related to continued poor physical health. Pruritus of the scalp or generalised pruritus appeared as prominent symptoms in the exacerbations of the anxiety state. A marked hysterical overlay was also present.

Psychopathological features tended to centre largely on sexual maladjustments and difficulties in interpersonal relationships. Resentment or hostility was commonly expressed or often implicit in the stressful life situations. The group displayed considerable variation in personality structure and psychopathology. They tended to range from the simple anxiety state of which the pruritus appeared to be a symptom, to complex psychopathological disturbance in grossly maladjusted personalities. In the latter group, two cases were near psychotic. The localisation of the pruritus was rarely related to the nature of the predominant conflicts, or its extent proportionate to the degree of personality maladjustment.

Seborrhoeic dermatitis (23 cases)

Average age, 36.5 years. Sex distribution, 19 males, (83%); 4 females, (17%). Married, 13, (57%). Average age at onset, 26.8 years; average duration of dermatitis, 7.8 years.

The family background was disturbed in a considerable number of patients, (52%), the principal factor being domestic strife in which alcoholism and paternal infidelity figured prominently. In 5 patients, the premature death of one parent occurred in the childhood or adolescence of the patient. Parental health showed a fair incidence of nervous disturbance and frank neurosis but was otherwise good. Faulty parental attitudes were noted in 48% of the cases, overprotection being most prominent. In 4 patients the home background was one of poverty; three patients described their childhood environments as unhappy due to parental discord.

The average family numbered 4.2 children, of which the patient occupied a vulnerable position in 68% of cases.

Sibling health was on the whole good.

The personal history of the patients revealed 39% with faulty attitudes to their parents. Hostility to the father was a prominent feature of such relationships. Relations with siblings appeared normal.

The childhood adjustments of the group were faulty in 56%. Poor social adjustment was noted in 43% of the patients as children, while 17% reacted badly to school in mixing badly and withdrawing from group activities. Neurotic traits were noted

in 60% of patients, in some cases to a considerable degree.

Educational attainments appeared average or less, and few proceeded to higher education. This was reflected in their basic occupations where the majority were employed in unskilled or semi-skilled labour. Five patients held 'executive' posts, but these tended to be in small departments of large organisations or similar situations where personal responsibility was fairly low. Only two of these patients could be said to hold really responsible positions. The work records of the group showed average stability but there was a considerable tendency to try several jobs and different occupations. However, truly unstable work records were found in only 3 patients. As might be anticipated the incidence of stress arising from the employment was relatively low, (26%). Included in variable combination, were difficult interpersonal relationships, (3 patients); work frustrations, (2); excessive hours of work, (1); unacceptable responsibility, (4).

The faulty adjustments of the group in childhood tended to be propagated into their adult life. Thirteen patients, (56%), reported difficulty in their social relationships, in 3 cases to a marked extent. The latter were very inadequate, inferior, personalities with a life-long history of difficulty in adjustment. Similarly, 60% of patients displayed sexual maladjustment, marked in 3 cases. One patient had been in the hands of the police for assaulting young girls; 2 others, one a grossly schizoid inadequate personality, had withdrawn from all heterosexual activities. A further patient displayed an abnormally puritanical

attitude to heterosexual activities, and had severe masturbation guilt. The majority of the group tended to be equally socially and sexually inhibited. However, two patients were unusually promiscuous. Many tended to blame their unsightly skin conditions for their difficulties in heterosexual relations.

Thirteen patients were married for an average of 12.9 years. Four patients had no children, the remainder a group average of 1.7 children. Significant marital incompatibility was described by 4 patients. In 3, this was related to the severe personality maladjustment displayed by the patient in all his interpersonal relationships. In the fourth case, the second wife was adversely compared with the dead first wife in every field of marital relationship. Marital sexual maladjustment was associated in two of these patients, and also present in two others. In one patient, with a childhood environment of rigidly imposed religiousness and morality, sexual guilt was active in inhibiting libido. Unfortunately his wife was sexually overactive and sexual discord was accordingly intense. Conflicts over religious differences, and the frigidity or suspected immorality of the wife, figured prominently in disturbing the sexual relationships of other patients. Resentment to the children for monopolising the wife's affections was shown by one patient.

The record of frank nervous breakdown in the seborrhoeic group was high at 56%. The majority of such cases were anxiety states, but in 2 patients, depression had been sufficiently severe to have warranted treatment with E.C.T. A third patient

had been discharged from the Army as a psychotic depression. The number of patients with chronic severe psychological disturbance was unusually high, and in 5 cases they had been under psychiatric surveillance for many years. Apart from anxiety symptoms, the principal feature of same was a depressed paranoid hostile attitude to life. Schizoid withdrawal was marked, and usually blamed on the skin. Two patients were close to a schizophrenic breakdown. Another patient with seborrhoeic dermatitis of scalp displayed an obsessional attitude to same, and a daily ritual of treatment, which was almost of psychotic degree. The same general paranoid hostility was exhibited.

Psychosomatic illnesses were uncommon and consisted of asthma, (2 patients); chronic vasomotor rhinitis, (1); and migraine, (1). Three male patients complained of poor libido. Frigidity was described in 3 wives, and 2 suffered from chronic physical illness. One child suffered from infantile eczema. Behaviour disturbances were exhibited by two children from homes distinguished by persistent domestic strife.

The social maladjustment of the group was reflected in their leisure activities. The interests of the majority were confined to the home or otherwise restricted. In 4 cases, such activities were of a solitary nature. The personality records of the group displayed chronic anxiety, insecurity, feelings of inadequacy and inferiority, and poor self-confidence. A number showed well-defined depressive trends. In the sphere of employment they worked well, if inclined to over-conscientiousness.

Drive was lacking in most cases and assertiveness was not marked. Where present, in most cases it was an over-compensation for self-appreciated feelings of inadequacy. Superficially they appeared submissive, but undercurrents of resentment and hostility were near the surface. Their personalities tended to the schizoid rather than the hysterical, and obsessional traits were conspicuously in evidence. Sensitive and easily upset, many had difficulty in exteriorising their aggression and brooded very readily. Tension appeared of varying intensity. In most cases it paralleled the degree of expressed anxiety but in 2 cases it dominated the rest of the picture, and was more marked than any yet encountered. Needless worrying was prevalent through the group.

In general, personalities varied from the mildly unstable, nervous, individual with fair social adjustment, to the solitary, hostile, brooding, schizoid. The incidence of abnormal personalities was on the whole considerable.

The skin reaction for the most part tended to be phasic. Significantly severe stress was related to the onset of the condition in 60%, and to the major exacerbations in 87%. Stress arising primarily from personality maladjustments was of major importance in 43%. The seborrhoeic dermatitis appeared in the course of a chronic or acute neurosis in 43%. Associated neurodermatoses were urticaria (1); pompholyx (1); and essential hyperhidrosis (3). No significant history of preceding skin trauma was obtained, except possibly in one case where a burn of face from a shell explosion was followed by a chronic sycosis barbae.

The principal precipitating factors were described as emotional disturbance; excitement or tension; and situations productive of resentment and hostility. In few cases was it possible to relate each exacerbation to stress. In some instances the skin reaction appeared to return without cause. However, most patients described increased tension and irritability preceding such phases.

The life stresses related to the skin reactions were many and varied with possibly hostility situations predominating. This hostility was normally directly related to some environmental disturbance or to the world in general, rather than to foci of hostility in the patient's early life. Thus a dour Yorkshire planning engineer developed urticaria or a seborrhoeic eczema of his ear whenever his many frustrations at work became too much for him. He was unable to express the resentment he felt to the bureaucratic control of his employment, or the chronic hostility directed to the mother-in-law who resided with him. Brooding, depressed and sullen, he could distinctly relate such episodes of emotional disturbance to his outbreaks of urticaria or seborrhoeic eczema. A young girl indulging in regular pre-marital relations displayed a fairly persistent axillary seborrhoea, against a background of sex guilt and persistent hostility directed against her mother. The latter, by excessive dependency on the patient, perpetuated a considerable conflict in the patient's mind concerning her marriage. The mother, by devious subtle ways aggravated this conflict and the patient experienced considerable resentment to her and of the

situation in which she was placed. Any cause for increased resentment or episodes of acute anxiety, aggravated the seborrhoeic condition. One patient described an acute exacerbation of his seborrhoeic dermatitis while angrily telephoning his employer, who had just unreasonably dismissed him. Another, with several clear-cut exacerbations, developed same against a background of hostile feelings to his relatives-in-law, for untowardly influencing his wife. Any severe quarrel with his wife, especially if he first tried to control his anger and resentment, would lead to aggravation or exacerbation of his rash. A severely maladjusted patient with a history of deprivation and rejection in childhood, suffered greatly at the hands of an immature hysterical wife for the sake of securing his children's welfare. If he ventilated his feelings too much, she would leave him for a period. Thus prevented from expressing his resentment and anger, outbreaks of seborrhoeic dermatitis would appear in this setting.

Guilt, mainly in relation to sex, figured prominently in a small number of cases. One patient cheerfully maintained a series of extra-marital liaisons for years, without upset. Following the onset of chronic illness in his wife he continued his extra-curricular activities but now felt guilty where before he had not. Seborrhoeic dermatitis of the face developed at this time and has been of varying severity since. After the death of his wife he soon remarried but has felt guiltily unhappy in this relationship and guilty to his children for breaking up the home and his early re-marriage. Since the death of his wife

his dermatitis has been persistent and aggravated by minor stresses and anxieties.

Guilt and emotional upset following the death of a comrade soldier as a result of a self-preservative action by a patient were associated with the onset of seborrhoeic dermatitis.

Other forms of life stress were varied. One patient developed an exacerbation of a quiescent seborrhoeic dermatitis following the death of the mother on whom he was overdependent. Subsequent exacerbations were conditioned by an arduous employment, and the effect of same on the symptoms of the anxiety state which had persisted since the mother's death. An unmarried male patient with a seborrhoeic dermatitis principally localised to the scrotum perpetuated the reaction by rubbing and scratching the area with consequent erotic pleasure and ultimate orgasm. Another patient became abnormally conscious of the rash and would carefully assess its area every day to ensure there had been no spread. If the latter had occurred, he would immediately panic and a generalised seborrhoeic dermatitis would rapidly ensue. The speed with which the reaction could occur was illustrated by his wedding morning fear that the rash would recur to spoil the day. Pacing restlessly about the room waiting for the hour to approach, he could feel his face growing redder and hotter. Before he left home for the ceremony, the rash had appeared and soon became generalised. In his case, any severe emotional upset would immediately exacerbate the rash.

The principal psychopathological features then ranged around personality maladjustments; sexual difficulties; hostile

relationships; and conflicts related to guilt. Anxiety factors played their usual precipitating roles. Acute stress factors were relatively unimportant here as compared with personality difficulties and long-continued stress. The personality maladjustments were variable, but in some cases, gross. The attacks of seborrhoeic dermatitis tended to occur most frequently in a setting of resentment and hostility, which for some reason could not be expressed. They were often associated with acute emotional upsets, often in the nature of angry outbursts. In others they occurred in a setting of chronic anxiety, with emotional disturbance of varying cause as the principal precipitating factor.

Atopic Eczema (20 cases)

Average age, 24.5 years. Sex distribution, 9 male (45%); 11 females, (55%). Married, 25%.

The age at onset in most of this group was usually infancy or early childhood. The duration of the skin disorder could not be assessed with any accuracy in view of the uncertain age of onset, and the well known tendency for long periods of remission.

The family background appeared a fairly normal one, the main disturbance being due to faulty interpersonal relationships in the home. A striking feature was the high incidence of faulty parental attitudes, (75%), among which overprotection predominated. The atmosphere of the home was in many cases a rigid, moralistic, or critical one. The incidence of neurotic disturbance in the parents was low, (15%); of psychosomatic illness, high, (45%). Of the latter, asthma was the most common occurring in the parental history of 6 patients. The material background of the home was invariably good, but 4 patients considered their childhood environment unhappy. A further small number described it as variously happy and unhappy.

The average family unit numbered 3.4 children, and the patient occupied a vulnerable family position in 75% of cases. Sibling health showed a low occurrence of nervous disturbance, and a moderate amount of psychosomatic illness, again with asthma predominating. In 3 patients the siblings had nervous skin disorders, two being contact dermatitis with psychogenic aggravation, and one a neurodermatitis. Illness of anxiety

value was tuberculosis, suspected or proven, and carcinoma.

The patient's attitude to the parents was faulty in 65% of cases. Overdependency and hostility were the commonest reactions and often coexisted, the dependency being on one parent and the hostility to the other. As a rule the hostility was centred on the father, more particularly in males. The father's attitude to the child was overprotective but mingled with a critical disparagement which was usually resented. This was particularly seen in those cases with a clear history of infantile or early childhood eczema or asthma. The father's attitude was to regard the child as a rather unfortunate weakling. Any ambitious projects on the latter's part were usually countered by the parent's pointing out his physical disabilities. Hostility to siblings was exhibited by 4 patients.

Despite the parental situation and the overprotection, the early adjustment of the group was fairly good. In only 3 cases, (15%), was it considered significantly faulty, although neurotic traits, usually of minor degree, were reported in 50% of patients. The 3 patients with faulty childhood adjustment also displayed same in their school and early social adjustments.

Educational standards were not high and only 5 patients had a grammar school education. Similarly most patients occupied jobs of a semi-skilled or unskilled nature. Their work records were reasonably stable although with a tendency in many cases to try several types of occupation. Three patients had never worked due to their skin rashes. Only 2 patients had responsible jobs, in one case running her own business. Work stresses were minimal.

Socially, the atopic eczema patients appeared to mix reasonably well. At school they had joined in the sports and social activities although their attendance was sometimes poor due to their skin rash. As adults they continued this pattern of social behaviour, although a small number reported moderate difficulty in mixing. Sexually they did not appear as well adjusted and their heterosexual attitudes were immature or inhibited to a large extent. Excessive masturbation with guilt was not uncommon in the males.

The five patients married had been so for an average of 3.2 years. No significant disturbance of the marital relationship was noted.

A significant history of frank neurotic illness was noted in 4 patients, in each case an anxiety neurosis. Psychosomatic illness was a notable feature in 75% of the patients, asthma being the almost invariable associate. One patient had well-marked pre-menstrual tension states; another a history of asthma, migraine, dysmenorrhoea, and psoriasis.

On the whole patients with atopic eczema were sociable individuals, but a number tended to restricted or solitary pursuits. In the latter case their skin was often blamed for their social inadequacies. The group were generally anxious, tense, overactive individuals, in many cases apparently fairly confident and assertive. On closer inspection it was found that part of these latter features was a compensatory facade. The majority of patients were essentially insecure with moderate feelings of inadequacy and inferiority, and inclined to worry

excessively especially over the reactions of others to their skin disfigurement. They were sensitive and easily upset and depressed, and tended to brood easily. A number kept their emotions under tight control and had difficulty in expressing their affections or aggressions. Conscientious in their employments, they tended to a rigid personality structure with somewhat high standards of behaviour and morality. Dependency leanings were prominent, and the general impression of the personality as immature in a number of cases. Hostility was little in evidence other than in relation to the parents. Obsessional traits were not common, and in 2 patients hysterical features were well defined.

The skin reaction was in many cases continuous from its onset. Where the onset was other than in infancy or early childhood, significant stress factors could usually be related to same. Similarly, significant stress could be related to the major exacerbations in 55% of cases. However, specific stress factors were somewhat difficult to delineate, and in some cases were denied completely. In the latter, however, evidence of significant stress arising from personality maladjustment was often forthcoming. In 4 cases the recent atopic manifestations occurred in a setting of chronic anxiety neurosis.

Associated skin conditions were pityriasis rosea and seborrhoeic dermatitis, in the history of one patient; psoriasis in another.

The principal precipitants of attacks were emotional disturbance; excitement or tension; worry; heat; and hostility

feelings. The major stressful situations were conflicts over close relatives, usually the parents; hostility or resentment situations; guilt; and other anxiety situations. Many patients described how if upset or tense, their skin would irritate and they would scratch. Scratching tended to be nocturnal and considerable guilt and remorse was aroused on finding this had occurred during sleep. One patient would walk around her room each night before retiring, willing herself not to scratch. Her anxiety and shameful remorse was great if she had done so the next morning. The tendency for this scratching to occur with minimal or no stress and little reaction in the skin raised a doubt of dermatitis artefacta in the minds of the dermatologists in 3 cases. In only one patient did the history support this contention, an adolescent girl with a hysterical pattern of behaviour who dominated her environment by her skin disorder. One had the uneasy feeling that this was not an isolated case, in view of the number of instances where the scratching which perpetuated the eczema appeared quite unrelated to any emotional disturbance, increased tension or other factors.

In the majority of patients, two distinct psychopathological mechanisms could be discerned. One was the disturbed parent-child relationship; the other situations productive of emotional disturbance in one form or another. The basic mechanism was the former. It took several forms, but essentially there appeared to be a continued conflict between the desire of the patient to achieve independence and the parents to continue the earlier dependent relationship. The patient also appeared to experience

conflict between his desire for independence and his accustomed pattern of dependency. As already mentioned, the parent of the same sex tended to be the target for the patient's hostility and resentment at the overprotection, in view of their more critical disparaging attitude. Thus one patient, as a child with atopic eczema and asthma, was prevented by his parents from joining in group activities because of his health. The father, who played a more authoritarian disciplinary role in enforcing these restrictions, became the focus for his resentment. Any effort on the part of the patient to achieve independence in later life was countered by pointing out his physical weaknesses and the necessity for their continued support by the family circle. Eventually breaking away from home his skin improved, but any upset which augmented his basic insecurity and feelings of inadequacy produced renewed exacerbations. Similarly, a return to his home surroundings, even on a visit, produced further outbreaks with feelings of resentment at the silent disapproval and pessimism of his parents as to his ability to sustain life away from their protection. In another case where added to the eczema was a severe physical disability in the form of a congenital skeletal deformity and a hemiplegia from birth injury, a similar pattern of reaction was apparent. The patient, physically incapable of independence, yet longed and strove for same and was extremely resentful at the well meaning efforts of his parents to thwart his ambitions. The father, as before, was critical and quick to point out his physical inadequacies. As the goal of independence appeared to drift further away, the

patient's anxiety and resentments increased and his skin became worse. A female patient had eczema since early childhood following the birth of her younger sister. Exacerbation of her skin disorder was associated with severe conflict relating to her desire to leave home and be married, and her dependency on her overprotective mother. A further case with similar conflicts between his dependency role and desire for independence, developed a severe anxiety state in relation to same. The onset of his skin disorder at 12 years was associated with severe sexual conflicts, and guilt and anxiety related to aggressive sexual urges. Again the father was critical and pessimistic of the patient's physical capabilities, because of asthma since childhood. Hostility to this parent was prominent. In one patient the hostility to his father had developed into open conflict, which culminated in the patient leaving home. Eczema present since birth became exacerbated if involved in upsets or otherwise excited, or if apprehensive of new events. The most severe exacerbation followed breaking off relations with his father, when the latter refused to accede to his marriage.

While this pattern of reaction was not invariable it was sufficiently frequent to be impressive. However, other patients developed their eczema after varied stress situations. These included the death of a favourite sister, coupled with the father developing a carcinoma of bladder; the death of a critical father and the coincident illness of the overprotective mother, coupled with excessive masturbation with severe guilt; immediately prior to marriage in an overdependent girl; and after severe domestic anxiety.

In 3 patients with the onset in adolescence, no specific stress factors could be elicited. These, as with almost all other patients, described the importance of tension, anxiety, or emotional upset as precipitants of the exacerbations. One girl would inevitably have an exacerbation the next day if she lay awake at night worrying over the events of the day. These exacerbations were always associated with nocturnal excoriation. If the skin of her face became hot she felt the irritation and desire to scratch, but a flare-up would not spontaneously follow unless she excoriated.

The role of hostility seemed to be more in the psychodynamics of the individual, rather than an overt precipitant of exacerbations. Few patients described flare-ups related to increased feelings of resentment or hostility. Similarly guilt, when expressed, appeared to relate mostly to remorse for nocturnal excoriations. When associated with sexual maladjustment it acted as a potent source of emotional disturbance and skin exacerbation.

It is of interest to note that the asthma and eczema reactions often alternated, but in many patients tended to occur together at times.

The general impression of this group of patients was that their personalities were on the whole fairly normal, and the emotional factor only one of a number of triggers which could precipitate a skin reaction. The disturbed interpersonal relationships in the home tended to interfere with their full personality development, and maturation, and were a potent source of

emotional disturbance, but appeared of no greater significance. The situations and emotions associated with the onset and exacerbations of the skin disorder were of considerable variety and specific patterns of same were not easily delineated.

The social background of the group was poor. The patients were considered unhappy in 19%. The group contained 4.3 children, and the patient's position in this in 48% of cases. The group was good with a small amount of neurotic symptoms. The social history of the patients reveals a high incidence of social maladjustment. Patients with siblings showed a lower incidence of adjustment problems on the basis of the incidence of faulty social adjustment and the educational attainments of the group. The group was poor and their basic occupations of work were predominantly semi-skilled. Work records

Neurodermatitis (49 cases)

Average age, 46.8 years. Sex distribution, 25 female, (51%); 24 male, (49%). Married, 37 (76%). Average age at onset, 38.6 years. Mean duration, 4.3 years.

The family history of the group showed the premature death of one or both parents in 37% of cases, with a disturbed family background in 55%. Faulty parental attitudes were discernible in 53% of patients, with overprotection and deprivation of affection preponderating. Frank nervous disturbance was found in the parents of 41% of the patients. The incidence of psychosomatic illness, asthma, was low. Three patients had a history of neurodermatitis.

The material background of the home was poor in 20%, and the home environment considered unhappy in 16%. The average family unit contained 4.5 children, and the patient occupied a vulnerable position in this in 68% of cases. Sibling health was reasonably good with a small amount of neurotic disturbance.

The personal history of the patients revealed 44% with faulty parental relationships. Relations with siblings appeared normal. General childhood adjustment was on the whole good, and the incidence of faulty social adjustment and neurotic traits low. The educational attainments of the group appeared of average standard and their basic occupations of varied level, but preponderantly semi-skilled. Work records were fairly uniformly stable but in 44% of cases the employment was described as of stress value. Responsibility was rarely great, but appeared a fairly considerable burden in 22% of cases and

accounted for a great part of the occupational stress.

Adult adjustments were comparatively normal in the group and social difficulties were not prominent. Similarly, heterosexual relations were on a reasonably adult, mature, plane. Marital adjustment also appeared good and the incidence of incompatibility, separation and divorce was low. Sexual disharmony in marriage was rather higher with the main source of disturbance being female frigidity. The latter was in many cases associated with a fear of further conceptions. Three male patients described impotence for some months or years, associated with symptoms of an anxiety state. In two females marital sexual relations had not occurred for over 10 years. The average family unit was 2.5 children and 14% of the group were childless for varied reasons. A tendency to overprotect their children was noted in 16% of married patients.

A history of frank neurosis was found in 41% of the neurodermatitis group. These were principally anxiety states or less frequently, depressive reactions, with one case of obsessional psychoneurosis. A number of cases were mild menopausal depressions. Psychosomatic illness was infrequent and included peptic ulcer, (2 cases); asthma (2 cases); functional hypertension, (2 cases); and pre-menstrual tension states (3 cases). The health of the spouse and children showed no major abnormalities other than considerable sexual maladjustment in the former.

The interests of the group were predominantly social although in many cases restricted to a small circle of friends or

activities. Their personality assessments did not display any specific characteristics other than the anxiety, tension, and predisposition to worry so frequently encountered. They were sensitive individuals, rather easily upset and tended to become depressed rather readily. A considerable number appeared to have difficulty in exteriorising their emotions and were prone to brood. They tended to be more assertive than submissive, and displayed a reasonable amount of drive and ambition. Basically insecure, many complained of feelings of inferiority and inadequacy and poor self-confidence. In a number of cases an undue tendency to worry over their health was observed. Quite a number revealed significant obsessional traits. On the whole they varied from the rigid personality with high standards of morality and behaviour to the more pliant, mature, and adaptable individual. The majority showed a highly conscientious attitude in their personal and occupational relationships.

The skin disorder was continuous with exacerbations in 86%. Significant stress preceded the onset in 76%, and the major exacerbations in 84%. In 19 patients, (38%), the skin reaction occurred in the course of a neurotic or depressive illness. The principal precipitant factors were those situations arousing emotional disturbance, excitement, tension, worry or hostility. Major stress situations revolved around close relatives, occupations, hostile relationships, and situations productive of severe anxiety.

Other skin disorders were associated, or encountered in the histories of 16 patients. They included dyshydrosis (6); acne

necrotica (2); ano-genital pruritus (3); urticaria (2); acne vulgaris (2); and erythrodermia (1). In 10 patients, the skin disorder was described as occurring secondary to skin irritation or injury in their occupations; after using detergents; or following the local application of substances to which the patients considered themselves sensitive. In the majority of these cases it was possible to discern evidence of nervous disturbance prior to the use of, or contact with, the implicated substances. A large number of patients related their tendency to scratch excessively to tension or excitement. In such cases the scratching was sometimes of orgasmic intensity and usually followed by transient or prolonged relief of tension. One case with a scrotal neurodermatitis would voluntarily scratch the affected area whenever he felt tense and irritable, and continue to do so until he felt relaxed and at ease. There appeared to be no observable sexual association in this act despite the localisation of the neurodermatitis and the existence of severe marital sexual disharmony. No erection or orgasm was associated, and relaxation was gradual and not with post-coital suddenness.

In the more localised forms of neurodermatitis the situation of the lesion varied greatly as did its extent. In some patients the neurodermatitis tended to restrict itself to a limited and consistent area. Other patients tended to a more disseminated form of reaction, often after a strictly localised eruption had been present for some time. In many such cases the dissemination was preceded by an acute anxiety reaction, most often related to the skin and its implications to the economic

or personal life of the patient. The localisation of the neurodermatitis in some cases could be associated with the principal stress situations, in others not. Thus one patient with localised neurodermatitis of the groin and perineum had irritation in this region only for the 2-3 days preceding the menstrual period and continuing during the latter. The neurodermatitis began after the birth of her fourth child and she was extremely apprehensive of further pregnancies. As her husband for religious reasons would not use contraceptives, the onset of each period was awaited with considerable anxiety and apprehension. In the case of the male patient with scrotal neurodermatitis the principal conflict situation lay in the marital sexual disturbance. The wife was frigid and feared further conception, and would not allow normal sexual relations. However, in another patient whose neurodermatitis began after the breaking off of her engagement due to her distaste for the sexual demands of her fiance, the localisation of the lesion was at the nape of the neck. Significantly, vulval pruritus developed at the same time. Other patients with localised neurodermatitis in the genital area revealed no consistent relationship with sexual maladjustments or conflicts and the principal stress situations were those productive of anxiety. In one case of exudative neurodermatitis whose main stress was a guilty extra-marital relationship, the dermatitis was principally on his hands tending to spread to his limbs. Occupational stresses were important aetiological factors in a number of cases, but no consistent relationship between this factor and the site of the skin reaction could be observed.

The persistence of a neurodermatitis could in some cases be traced to phobic anxiety related to its localisation. Thus one patient with a healing neurodermatitis of the leg became acutely anxious with exacerbation of the skin reaction, when informed of the death of a cousin from a sarcoma of leg. This was aggravated by the cousin having previously had a dermatitis of her lower limbs. In another case a localised neurodermatitis of the forehead was associated with phobic anxiety of a tumour of the brain. The patient felt sure the skin reaction was bound up with this underlying intracranial pathology. The patient's brother had died of cerebral tumour as a child.

The major stress factors preceding the onset or exacerbations of the neurodermatitis were variegated. They had the common characteristic of being adequate to produce marked emotional disturbance in the patient. A miner developed an exudative neurodermatitis of his hands and limbs following an accident in the pit in which a close friend of his was killed. Although the patient was not directly responsible he was to some extent involved and felt guilty and ashamed of the opinions of his workmates. His rigid self-righteous personality could not tolerate this situation, which was relieved by the continuance of the dermatitis preventing his return to the colliery. The skin reaction had been preceded by a period of intense strain doing two full time jobs at once, and a situation in which resentment to his son figured prominently. Another miner developed his neurodermatitis of neck, trunk and limbs after being involved in an accident, in which the pit cage crashed with some loss of life. In hospital the skin would clear.

As soon as he returned home and was faced with a return to work, it would recur. Even a change of employment did not greatly help matters as he could not accept the basic conflict situation, his fear of returning to underground work, and yet felt ashamed and out of place in any other employment. Again, one patient, an overprotected adopted child, developed neurodermatitis of his limbs when promoted to an overman in the mines. He could not stand up to this greater degree of responsibility and rapidly developed symptoms of a progressive anxiety state, which was well established before the neurodermatitis appeared. Anxiety over his future career and over the persistence of his dermatitis led to an acute exacerbation of his anxiety state, and an exacerbation of the rash.

In some cases, the history of the patients and their reaction to the neurodermatitis suggested the scratching which potentiated the latter was based on a hysterical conversion mechanism. A widowed patient very dependent on the affections of her daughters developed neurodermatitis when the husband of one daughter living with her, returned from the Forces to set up a home in another town. Residing with her other daughter, an exacerbation of the rash occurred whenever the son-in-law discussed establishing a separate home. The daughter, unable to resist her mother's incapacity, would shelve such plans with rapid relief of the skin condition. A similar situation was found between two sisters living together, where one was thwarted from setting up a separate establishment with her husband by her sister's skin disorder periodically relapsing. Another male patient, a chronic anxiety-hysteria, with a dislike for work, enjoyed the doubtful benefits

of continued State assistance because of an intractable neurodermatitis. Any stress, such as a suggestion he might return to work, was associated with an exacerbation of his neurodermatitis.

Hostility and resentment figured largely in the background of patients with neurodermatitis, but were not greatly prominent features of the precipitant stress situations. They were of considerable importance in some cases, however, as in the patient whose rash flared up in a cloud of resentment against his mother and sister. This was provoked by their indifference to his illness, which he considered precipitated by his undoubted efforts to assist them following the death of his father. He then ran the family business as well as continuing his own employment, working some 16-18 hours per day without extra remuneration. When his mother took no notice of this effort and then finally sold the business over his head without warning, his resentment grew beyond bounds. Coupled with the prolonged strain he had undergone, and many work anxieties, a major exacerbation ensued. A factor which tended to keep his dermatitis active was his guilty shame of handling money for the public as a Post Office counter clerk, with his hands obviously bandaged; people would comment on same to his great distress as he feared they might consider his rash infectious.

An overworked district nurse developed neurodermatitis in a resentful conflict with her local general practitioner. In another patient, the rash appeared when nursing a difficult senile domineering mother, coincident with the death of her former fiance whom the mother had prevented her marrying. The death of the mother in suspicious circumstances, - the patient had unreasonably

delayed in sending for medical aid - and the associated guilt, coupled with phobic anxiety of cancer led to the exacerbation of the reaction.

Guilt, again figured in a number of patients, but usually only as part of a complex emotional disturbance as above. It rarely appeared of significant intensity.

In general the neurodermatitis group was a most varied one with no specific trends of personality or characteristic patterns of reaction. They ranged from the reaction of the patient of apparently good personality exposed to severe continued stress, to the grossly maladjusted personality with his skin reacting to conditions of minimal stress. In some cases the associated scratching appeared to serve a hysterical purpose; in others to express a simple discharge of tension. A sensuous quality to the scratching was rare, although described in 3 cases. Sexual associations were strongly denied by these patients. Irritation or pruritus appeared fundamental in many cases. No observable differences in the histories of those with exudative neurodermatitis could be observed. A group of occupational dermatoses not included in the tabulated analysis, showed no characteristic differences in their histories. Their reaction to the occupational situation appeared based on fear of further dermatitis and its economic implications; dislike of the occupation for some reason; or an interest in compensation. The latter factor was least common. In some cases it was possible to see the progressive development of an anxiety state related to occupational or other stress prior to the onset of a sensitisation dermatitis from a

substance formerly handled with impunity. In other workmen a dermatitis was regarded as something shameful, implying possible uncleanliness or infestation; or as something greatly feared in leading to chronic disablement and loss of occupation. Either or both factors were adequate to potentiate an industrial dermatitis.

Chapter 3

Discussion of Findings

In this chapter the clinical findings are considered in terms of the principal differences between the diagnostic groups.

The case material analysed in the foregoing pages, ranged in age from 16-68 years. The duration of their skin disorders varied from 3 months to 40 years. The chronicity of the skin conditions was illustrated by the fact that in only 42 cases, (21%), was the history of less than one year's duration, and in 83 cases, (41%), was over 5 years. Excepting for atopic eczema, where the onset was usually in childhood, the average age at onset in most neurodermatoses ranged from 28.8-41.2 years. Again excepting atopic eczema, it was rare to find a neurodermatosis beginning under 20 years of age. The maximum incidence appeared to occur in the 30-45 years age group. There are many possible reasons for this selective incidence. It may be of some relevance that in the neurotic control group, the maximum incidence of same occurred in a similar age group.

The preponderance of females in Rosacea, and males in pruritus ani and seborrhoeic dermatitis, is accepted in dermatology. Such sex difference appears accentuated in this series of cases, and is also prominent in dyshydrosis. The reason for same may lie in the relatively small numbers in each group, or in the sampling. In pruritus ani, this marked sex difference may have been more apparent than real. A number of females with genital pruritus also complained of lesser anal irritation but were assigned to the former diagnostic category. No evidence was

obtained from the clinical findings to associate this sex-linkage in pruritus ani with homosexuality. The sex weighting in seborrhoeic dermatitis speculatively suggests a possible association between emotional disturbance in males, and the increased androgen secretion which is believed to be the principal factor in seborrhoeic dysfunction.

Surveying the family backgrounds of the analysed cases the principal differences between the groups appeared to be in the incidence of faulty parental attitudes. Overprotection on the part of the parents is a striking feature in atopic eczema. As the main incidence of same occurred in those patients with eczema from infancy, this parental attitude is to some extent understandable. The critical attitudes of the parents in atopic eczema have already been discussed in the profile study. In pruritus vulvae, parental attitudes were often overprotective, but also most frequently rigid, narrowly religious, and moralistic. The possible relationship of such attitudes to sexual maladjustments is obvious. It is of some interest to note the relatively high incidence of neuroticism and domestic strife in the parental histories of the neurotic control group, and their low incidence of faulty parental attitudes relative to the other groups. This suggests that faulty parental attitudes in the neurodermatosis group is related more to a specific quality in the relationship with the child, than to parental factors such as neuroticism. Rogerson, 1947, was of similar view, when he suggested that overprotection in atopic eczema expressed the interpersonal conflicts which had developed between parent and

child. Other workers pointed out that as atopic patients tended to occupy vulnerable positions in the family unit they were more exposed to the development of faulty parental attitudes. (Hillier, 1944; Woodhead, 1946). Certainly, in the analysed cases, a preponderance of atopic patients occupy vulnerable positions in the family. However, when assessed against the dimensions of the family unit, (3.4 children), the incidence of this factor appears of lesser significance as tending to occur by chance. Other neurodermatoses and the control group display a comparable incidence of patients in vulnerable family positions, more significant against their backgrounds of larger family units. Obviously, the smaller the family, the greater the incidence of vulnerable family positions, and the less their significance as a specific factor.

The low incidence of neurodermatitis in parents and siblings, suggested the unimportance in the neurodermatoses, of 'pseudo-hereditary tendencies', as discussed by Dunbar, 1943. It is of interest to note that in pruritus vulvae, where the material comforts of the home were invariably good, the incidence of reported unhappiness in the childhood environment was relatively considerable. This is presumably indicative of the disturbance of interpersonal relationships in the home, in the absence of material causes for unhappiness. In atopic eczema one would have expected a considerable number of patients to describe their childhoods as unhappy. That this was not so suggests a certain capacity for adaptation in this group.

The tendency for overprotected children to develop faulty attitudes to their parents was illustrated by the high incidence of such reactions in pruritus vulvae and atopic dermatitis. These are considered more fully in the appropriate profile studies. The considerable incidence of overdependency to the parents in Rosacea, was possibly related to the fair degree of overprotection to which they were exposed. However, one would have anticipated, as in atopic eczema, a number to react with hostility to this overprotection. The low incidence of such hostile attitudes in Rosacea is suggestive of a possible constitutional tendency towards dependency. This trend to maladjustment is supported by the number of Rosacea patients with a history of neurotic traits in childhood, (91%). This incidence is considerably higher even than in the neurotic control group, and in the absence of any greater incidence of disturbance in the family background. The early maladjustment in Rosacea is indicated by the comparatively high incidence of faulty childhood adjustments, (80%), in the group, and was particularly prominent in their social relationships. Pruritus vulvae patients revealed an almost comparable abnormality in the direction of neurotic traits and faulty childhood adjustments.

One might reasonably associate ^{these} abnormalities with disturbance of the family background and the influence of faulty parental attitudes. The tendency in pruritus vulvae and Rosacea was in this direction, but was completely reversed in atopic eczema. This again argues a constitutional difference of personality in atopic eczema, more particularly as compared with

Rosacea where the complicating domestic interpersonal relationships of pruritus vulvae, were not present. The Rosacea patient gave the impression of having been a constitutionally timid, dependent, child with little capacity for hostile, aggressive, expression. The atopic child on the other hand appeared to have a drive, and a power of adaptability which enabled him to counteract the parental influences.

It might also be noted that the incidence of neurotic traits and faulty childhood adjustment was considerable in seborrhoeic dermatitis and pruritus.

The faulty adjustments of childhood tended to be projected into adult life. Thus Rosacea, pruritus vulvae, pruritus, and seborrhoeic dermatitis all revealed a much higher incidence of faulty social and sexual adjustments than the other groups, including the control series. In atopic eczema while the social adjustment appeared fairly normal, heterosexual relationships were rather inhibited, attributed by the patients to self-consciousness of their disfiguring skin lesions.

Rosacea was the most consistently abnormal group. Their marital adjustment also seemed poor and the incidence of marital incompatibility and sexual disharmony considerable. The incidence of marital incompatibility was much higher than in any other group, but that of sexual disharmony was exceeded in pruritus vulvae, and closely approximated in pruritus ani and pruritus. It is notable that in this series, pruritus vulvae was encountered only in married females, although Rogerson, (1939), stated that it occurred as frequently in the unmarried.

In this group, 57% had no children despite the average duration of marriage being 14.9 years. The incidence of childless marriages in other comparable groups ranged from 11% - 53%, the equivalent married histories ranging from 11.5-22.1 years. The significance of this striking anomaly in the pruritus vulvae group is uncertain, but was probably related to their high incidence of sexual maladjustment. It may indicate a basic underlying fear of conception so that the latter is avoided, or possibly simply highlights their incompatible sexual relationships and presumable low frequency of sexual activity. To eliminate any error due to the sex-weighting of this group, the incidence of childlessness was assessed for the married females in other groups. The findings were similar.

The employment adjustments of the neurodermatosis groups were on a fairly satisfactory level. An unstable work record was infrequently encountered, although the incidence in seborrhoeic dermatitis was close to that found in the neurotic group. A number of patients tended to stay in the one job for many years. This, in some cases was indicative of their underlying insecurity and associated timidity of initiative. This trend was most marked in pruritus ani and pruritus, while that to a more unsettled occupational history was observed in atopic eczema and seborrhoeic dermatitis. The dyshydrotic group numbered in its ranks the highest incidence of patients in professional or executive posts. This was considerably higher than in any other group, including those with a similar preponderance of males. It was probably a reflection of the

higher level of intelligence in this group.

As might be anticipated the highest incidence of occupational stress was in dyshydrosis. It closely paralleled that of occupational responsibility, in contrast to pruritus and neurodermatitis where the incidence of occupational stress was high, but that of occupational responsibility considerably lower. Thus pruritus and neurodermatitis patients appeared to find considerable stress in their employment, other than that associated with responsibility.

The health records of the group revealed no major abnormalities other than a high incidence of frank neuroses in the histories of those with seborrhoeic dermatitis and pruritus ani. The incidence of psychosomatic illness, mainly asthma, was disproportionately large in atopic eczema, as would be anticipated. Similarly the health records of the marital partner and children revealed no specific trends, although in Rosacea the incidence of nervous disturbance in the former was unaccountably high.

The onset of the skin disorder and the major exacerbations could be related to stress of adequate dimensions in the majority of cases. In atopic eczema, with the onset usually in childhood, this association was obviously less clearly defined. In a number of cases the stress appeared to be derived directly from the maladjustment of personality rather than related to environmental difficulties or specific conflict situations. In the tabulated data, (Table 4), this is especially obvious in pruritus and seborrhoeic dermatitis. The incidence in Rosacea appears low, but this was actually not so. The factor was

assessed in terms of major exacerbations arising in the absence of other extraneous factors, where the personality maladjustment itself appeared the source of stress. In Rosacea, the major exacerbations were invariably associated with stressful situations, but the persistence of the condition, and certain minor exacerbations, could be related to the personality maladjustment and to the interaction of same with a disfiguring facial lesion. This interaction was also an important factor in seborrhoeic dermatitis as to a lesser extent in other dermatoses in exposed areas. Situations which tended to invoke the major defects in the personality were therefore stressful to the maladjusted, while not normally in themselves of stress value. Thus in Rosacea, many exacerbations were related to situations which evoked their social inadequacy and the characteristic blush reaction.

The aetiological importance of blushing in this condition has been discussed earlier. A labile blush reaction was also encountered in other neurodermatoses, but to a much lesser extent than in Rosacea. Of a group of 40 patients with varied neurodermatoses questioned on this point, 45% reported they had always blushed easily. In the literature the incidence of blushing was quoted as 60% for a neurotic group and 50% for normal controls. (Greenhill and Fenesinger, 1942). In the present series of Rosacea patients, the incidence of a labile blush reaction was almost 100%.

A similar reaction to personality maladjustment was encountered in hyperhidrosis, in circumstances where anxiety was

invoked by situations not usually considered of stress value in themselves. As in Rosacea, and other dermatoses where social inadequacy was marked, a vicious circle was set up by the skin lesion augmenting the personality difficulties, and thereby increasing the stress reaction and potentiating itself.

A considerable number of neurodermatoses occurred in the course of a neurosis. This was most often encountered in pruritus vulvae, pruritus, and seborrhoeic dermatitis. This finding is of interest in view of the oft-quoted concept, that a psychosomatic illness is an adaptive reaction which may occur as a neurotic equivalent. Alternation of the neurosis and the neurodermatosis was not seen to other than a small extent in this series of cases. Both occurred together as a rule and presumably had a common origin in a focus of emotional disturbance.

Precipitant factors in individual dermatoses were many and varied. The principal precipitant factors shown in table 4 were scored on their incidence as reported by patients. They were not separately assessed for each patient and so such incidence was not necessarily representative of their actual frequency of occurrence. They were the situations or conditions most commonly related by patients to the changes in their skin conditions. As might be anticipated, emotional upsets, excitement, tension, worry, and anxiety all ranked high as precipitants, but to a varying extent in different groups. There were no obvious reasons for this variation other than possibly in the patient's use of language to describe these factors. Thermal changes, principally heat, were understandable

precipitants in the vascular and pruritic disorders, in the latter case presumably by lowering the itch threshold (Cormia, 1952).

The low incidence of this factor in pruritus other than ano-genital, was probably because the former most frequently occurred in exposed areas, less liable to undue heating.

Resentment or hostile feelings were important precipitant factors in dyshydrosis, seborrhoeic dermatitis, and pruritus ani.

That such feelings were not freely vented was shown by the comparatively low incidence of anger as a precipitant factor.

Social embarrassment was understandably most important in Rosacea. The incidence of this factor in dyshydrosis was confined mainly to those who reacted to social anxiety with hyperhidrosis.

In anal and vulval pruritus other neurodermatoses were frequently encountered. Apart from pruritus elsewhere, the common finding was localised neurodermatitis, usually in the genital or perineal region and presumably secondary to scratching. Antecedent skin trauma in the area of the neurodermatosis was principally found in dyshydrosis and to a much lesser extent in pruritus vulvae and neurodermatitis. Such trauma may have acted as a 'locus minorae resistentiae' for the subsequent development of the neurodermatosis. However, in the dyshydrotic group most cases with antecedent skin trauma were those with recurrent cheiropompholyx. The effect of the original trauma may have been by associated anxiety to increase sweat gland activity, or by causing changes in the skin, to produce obstruction of the sweat ducts. Either or both conditions, by rendering the sweat

gland ducts incompetent to deal with the secreted sweat, would favour the development of the sweat retention syndrome.

The major life stresses associated with the onset or exacerbations of the skin disorder were assessed from the life histories of the patients. As can be seen, (Table 5), the relative incidence of individual stress factors varied widely between the diagnostic groups. In only a few neurodermatoses did any one stress factor appear of outstanding importance. These included occupational stresses in dyshydrosis, hostility situations in pruritus ani, and sexual difficulties in pruritus vulvae. Apart from their marked incidence in pruritus ani, situations productive of hostility and resentment figured prominently in every group. An approximately similar incidence, (not tabulated), was found in the control series. This was suggestive that the importance of hostility in the neurodermatoses was no greater than in the neuroses. The findings also indicated that excepting for pruritus ani, hostility reactions were not likely to predominate in any dermatosis. Thus in skin disorders distinguished by itch and scratch, other than pruritus ani, life stresses related to hostile feelings were no more prevalent than in those conditions where scratching was of minimal importance. These findings do not necessarily contradict the psychodynamic view of scratching as expressive of repressed hostility or aggression. In the clinical analysis no distinction was made between hostility which was overt and therefore needed no other mode of expression, and that which was implicit in the life situation and may have been repressed and possibly expressed

in scratching. Further in table 4, it may be noted that the incidence of patients who associate their skin reactions with hostile feelings is comparatively low in the scratch dermatoses, i.e. the pruritic disorders, neurodermatitis, and possibly atopic eczema. This suggests considerable repression of hostility in these groups, which might well be vented on the skin. In seborrhoeic dermatitis, the incidence of hostility situations in Table 5 was considerably less than the incidence of hostility precipitants (Table 4). This is in keeping with the clinical recognition of hostile paranoid attitudes in a number of patients with seborrhoeic dermatitis. Thus hostility feelings were associated with attacks in the absence of appropriate environmental situations. A similar trend to hostile attitudes is noted in the profile study in pruritus ani. It is doubtful if the excessively high incidence of hostility reactions in this group can be entirely explained in this way, even although a hostile slightly paranoid attitude would tend to invite hostile relationships. No better explanation readily offers itself and it is noteworthy that in a number of cases of pruritus ani, hostile relationships, with parents, wives or workmates, have tended to be conspicuous throughout their lives. This possibly argues a basic personality trend to hostility as a principal factor in inducing such hostile relationships. The low incidence of the latter in seborrhoeic dermatitis can possibly be explained in the association of schizoid attributes of personality with their tendency to hostile attitudes. Thus, withdrawn and seclusive they tend to be involved in fewer hostile relationships

than the more normal pruritus ani patient. One might also relate the hostility factors in pruritus ani with the paranoid attitudes described in Freudian literature as being associated with homosexuality. However in this series there was no clinical confirmation of such association.

Also of interest is the comparatively low incidence of hostility provocative situations in relation to the exacerbations of atopic eczema. This agrees with the view that in this group hostility is associated with their interpersonal relationships principally in the family setting.

Guilt is relatively infrequently encountered in the neurodermatoses and bears no specific relationship to any one diagnostic group. This applies to overtly expressed guilt and situations in which it is implicit. However if one takes the view that hostile feelings are always attended by guilt, its incidence would be similar to that for hostility.

Anxiety was widely disseminated throughout the neurodermatoses, and most exacerbations occurred in a setting of increased anxiety. Related to health other than the skin it tended to take on a phobic quality. This was most frequently encountered in pruritus ani and vulvae, possibly related to the high incidence of neuroticism in both conditions. It might also be explained as a possible cause of the pruritus by the associated emotional disturbance diminishing the pruritic threshold, so that normally/unnoticed sensations from the area to which the anxious attention was focussed achieved conscious recognition and elaboration. Again, the initial onset of pruritus, or the presence of a trivial local

lesion, might concentrate the patient's attention on the area and light up latent fears related to same. The resultant emotional disturbance, by reducing the pruritic threshold, would produce the same effect as before. It is an easy step from there to the vicious circle of anxiety-irritation-anxiety. It may also be relevant that as heat tends to diminish the pruritic threshold, irritant sensations might arise from easily congested areas like anus and vulva more easily than from elsewhere in the body. The alternation of the pruritic threshold by heat would also explain the relative frequency of pruritus when warm in bed.

Whatever the origin of the irritation, once developed, anxiety concerning the affected area would tend to potentiate the reaction or, in cases of hysterical pruritus vulvae, it would readily be utilised as a conversion symptom to avoid unwanted sexual relations.

Anxiety was a very prominent feature in dyshidrosis. As such it may be related to the clinically accepted association of anxiety and increased sweat gland activity. The author found the incidence of palmar or plantar hyperhidrosis in a group of 50 patients with anxiety states to be 44%. Most described same as commencing with the neurosis or being aggravated by the latter. Thus a close association between emotional sweating and anxiety is highly probable.

The clinical assessments of personality tended to reveal fairly consistent patterns related to certain individual syndromes. The Rosacea patients were distinguished by emotional inhibition and

social maladjustment. This pattern was by no means confined to the Rosacea group and was approached by that in seborrhoeic dermatitis and some cases of urticaria and neurodermatitis. An even more immature, hysterical, type of personality was encountered in pruritus vulvae and some cases of localised or generalised pruritus. The personality structure in urticaria, dyshydrosis, pruritus ani and atopic eczema tended towards what might be considered normality.

Rosacea and pruritus vulvae might be taken as representing the extreme end of a scale of personality maladjustment. If one arranged the neurodermatosis patients along that scale in terms of their deviation from normality, individual patients in each group would be widely distributed but the groups would tend to preponderate at various positions in the scale. Most patients with urticaria, dyshydrosis, atopic eczema and pruritus ani would be found near the normal end, tending perhaps to deviate a little. Neurodermatitis patients would be widely distributed throughout the scale as the range of personality variation was great in this condition. Rosacea and pruritus vulvae patients might be found at various points along the scale but the great majority would congregate at the maladjusted end. One cannot say that the consistent pattern of social inadequacy and emotional inhibition was specific for Rosacea, as a number of Rosacea patients showed this to a lesser degree than patients from other diagnostic groups.

The reason for the preponderance of certain personality patterns in particular diagnostic groups is not clear. It might

most easily be explained in terms of the physiological or psychological abnormalities which underlie these groups. Thus if blushing is specifically related to Rosacea, then individuals with personality maladjustments conducive to the blush reaction would preponderate in this group. Thus one finds the socially inhibited mainly congregated there. Other individuals may also be socially inadequate but if they do not blush as readily, will not develop Rosacea. In other words, Rosacea patients are socially inadequate because the latter is associated with blushing. However, all socially inadequate people who blush do not develop Rosacea when exposed to stress. Perhaps the marked emotional inhibition so often found in Rosacea is the reason for this discrepancy. Because of the former, the Rosacea patient is continually under tension. Again, the hysterical features in pruritus vulvae patients can be understood most easily as not specific to the dermatosis but simply those of the commonly associated conversion hysteria.

The relation of the chronically anxious, tense, personalities of dyshydrosis to emotional sweat secretion has already been considered. Patients with pruritus ani have a similar pattern of personality, but here drive and tension are less prominent and neurotic features more marked. Thus anxiety instead of being an associate of environmental stress is mainly a symptom of neuroticism, and therefore of a more phobic type. The paranoid features in seborrhoeic dermatitis are difficult to assess unless one theorises that this specific constellation of emotional reaction is associated with seborrhoeic dysfunction.

One may sum up in that specific personality patterns are not directly related to particular psychocutaneous syndromes in other than their association with the specific physiological or psychological disturbances which underlie these skin conditions.

The view that sexual maladjustment in Rosacea is expressed in a persistent 'blush of shame', is not in accordance with the above. Socially inhibited people tend also to be sexually maladjusted, because of a number of factors including their lack of opportunity for heterosexual activities. A view that the Rosaceous blush is of sexual origin does not explain the much greater preponderance of sexual maladjustment in pruritus vulvae. Obviously other factors must be involved. In this author's opinion these factors are the underlying elements of personality which determine the blush reaction on the one hand, and a hysterical mechanism on the other. Further, the main stress in Rosacea is in the social sphere and relatively little appears to be derived from the sexual maladjustment. Why then pass over the important stress and its known association with the aetiologically important blush reaction in Rosacea, for the lesser stress with doubtful vascular associations?

The localisation and form of the lesion may therefore be of some guidance to the underlying personality maladjustments or conflict situations. Possibly such factors of locale and form may be symbolic and capable of interpretation in this way. To carry this latter view too far, is as wrong as to ignore it altogether. Lesions of the hand occur in a large number of

dermatoses . If the dermatosis is one related to emotional sweat secretion the choice of the hands or feet is inevitable because of the anatomical distribution of such glands. Thus dyshydrosis must affect the hands, (or feet), in view of its relation to sweat secretion. Occupational stress reaches its highest incidence in this condition. That does not necessarily mean that the lesion symbolises an underlying conflict about occupation. It can also be explained in that the individual concerned, by his intelligence and personality features, is more exposed to occupational stress, with consequent anxiety and augmented sweat secretion.

Every conflict situation gives rise to anxiety. Anxiety is closely related to sweat secretion. Therefore any conflict can be associated with dyshydrosis and surely capable of such general interpretations as 'wishing to throw in one's hand'.

However, in a localised pruritus, or a dermatitis, where excoriation can be motivated by unconscious mechanisms, the localisation of the lesion may be a guide to underlying conflicts. An obvious point against carrying this too far is that different neurodermatoses can coexist in the same individual. From the point of view of interpretation one dermatosis may complement the other, but all too often they point in different directions.

The association of specific patterns of emotional response with particular dermatoses was not clearly delineated in this work. Thus 'resentment urticarias' did occur but so also did urticaria with other forms of emotional disturbance. The ambiguous relation of the pruritic and scratch disorders to

repressed hostility has also been considered. Attacks of atopic eczema occurred in association with a number of different emotions, apart from hostility to the parents.

The findings in this section of the work have been largely summed up for individual dermatoses, in the appropriate profile studies.

Among the principal general points of interest which have emerged, is the effect of faulty parental attitudes of over-protection, in conducing to poor adjustments in the child, and subsequently in the adult, and the development of child-parent conflicts in those of better constitutional endowment. The patterns of reaction in certain dermatoses and the relation of same to underlying personality maladjustments have been clarified. That certain personality trends do appear to preponderate in particular dermatoses is shown, but no specific association of personality structure and dermatosis was confirmed. Similarly no specific relationship between particular emotions and dermatoses was observed. Hostility and guilt were no more prominent in one dermatosis than in another or in a neurotic control group, excepting for possibly in pruritus ani.

PART IV

ANALYSIS OF TREATMENT

- Chapter 1. Introduction
- Chapter 2. Methods of treatment
- Chapter 3. Findings
- Chapter 4. Discussion of findings

Chapter 1

Introduction

Many case reports dealing with the relief of intractable skin disorders by suggestion, hypnosis, or psychoanalysis have already been described in the earlier review of the literature. They need no further mention in this section, other than to point out their general lack of adequate follow-up data. For such and kindred reasons, these reports have tended to be received sceptically by some dermatologists. Sulzberger and Baer, 1946, express this view when they deny that psychiatric treatment has yielded 'significant or lasting improvement' in their experience of cases of psychogenic skin disorder so treated. They exclude from this fiat the reported relief of warts and herpes simplex by psychotherapeutic measures. A perusal of the literature on the treatment of the neurodermatoses would not lead one to the same pessimistic conclusion as Sulzberger and Baer. Perhaps in the light of recent knowledge one would also tend to disagree with them that the cure of warts by crude suggestion is the most striking example of the therapeutic influence of the psyche on a dermatological condition. Allington, 1952, in an excellent review of the psychotherapy of warts, clearly demonstrated that while suggestion appears to influence the rate of regression of verrucae, the incidence of reported cures closely parallels that of the spontaneous disappearance of warts.

Sulzberger and Baer, 1950, appeared to recant of their views on herpes simplex when criticising the findings of Bland^k and Brody, 1950. The latter claimed to be able to relieve the acute eruptions of herpes simplex by psychotherapy. Sulzberger

and Baer denied they had ever seen a case of herpes simplex cured or materially helped by psychiatric treatment.

Treatment of the neurodermatoses by hypnotic suggestion has largely gone out of favour. One striking report of recent years deserves mention, the cure by hypnosis of a boy with congenital ichthyosis, (Mason, 1952). However, the diagnosis in this case has been cast into doubt by the more sceptical dermatologists (Sulzberger and Baer, 1952). Psychoanalytic case studies do not give a true perspective of the results of treatment of the neurodermatoses, as they are by their essential nature limited to usually one-case reports. True psychoanalysis has probably little place in this field, as in other psychosomatic illnesses. Gildea, 1949, makes this clear in his review of the results of psychotherapy in the treatment of common psychosomatic disorders. A comparison of the results of brief flexible psychotherapy and psychoanalysis revealed that both were either ineffective, or the flexible technique so adequately efficient as to make psychoanalysis unnecessary. Sontag, 1950, made the comparison of the effectiveness of psychotherapy in asthma and its lesser effect in allergic skin disorders. In the latter conditions, symptoms were often relieved or improved but the tendency was for recurrence. He deplored the fact, all too clear from scrutiny of the literature, of the paucity of studies of the effects of treatment in the neurodermatoses. Among the few are Lewis and Cormia, 1947, who reported in a group of 30 patients with mixed neurodermatoses, 50% cured or substantially relieved. Treatment was symptomatic, with superficial psychotherapy. In a subsequent paper, Cormia, 1951, reported that of 102 cases treated,

53% benefitted and 47% failed to respond to therapy or relapsed. Treatment was based on strong reassurance, insight into psychological mechanisms, and the encouragement of ventilation of emotions and conflict situations. The aim was not entirely to produce a symptomatic relief but to fundamentally readjust the patient to his life situation. The patients were drawn from a mixed group of neurodermatoses. Of these the best results were obtained with Rosacea; pruritus ani; neurotic excoriations and dermatitis artefacta; atopic dermatitis; and alopecia. The poorest results were obtained with parasitophobias; generalised or scattered pruritus; Lichen Vidal; and pruritus vulvae. The prognosis for treatment of the skin disorder appeared to depend not on the duration of the latter, but on the degree and duration of the psychological maladjustment. A history of long-standing neurosis was a bad prognostic feature.

The majority of Cormia's patients had been followed-up for an adequate period.

An interesting description of psychotherapeutic results in the treatment of a miscellaneous group of psychosomatic conditions, is given by Berle, 1952. Urticaria, eczema, and dermatitis figured prominently in this large series with a 25% rate of recovery, and a further 50-70% who were symptomatically relieved or recovered but in whom recurrence occurred when exposed to further stress. Follow-up was adequate. Psychotherapy was varied, ranging from non-directive to highly directive, and from predominantly suppressive to vigorous exploratory activity. Treatment was fairly intensive, extending in some cases over 20 months, at 1-4 week intervals.

Wittkower, 1952, treated a mixed group of 74 patients with Rosacea, eczema, pruritus ani, and pruritus vulvae, with brief psychotherapy along analytical lines. He claimed 60 of these patients were benefitted, of whom Rosacea responded best and pruritus ani least. No follow-up of cases is reported.

Other reports of treatment in individual dermatoses include those of Walsh and Kierland, 1947, who described marked improvement in 9 of 15 cases of universal exfoliative dermatitis, (neurodermatitis), treated along brief analytical lines. In 3 resistant cases with depression, a course of 7-8 electric convulsive treatments followed by supportive psychotherapy and manipulation of the home environment, gave significant improvement in two. Electro-convulsive therapy alone appeared useless. Williams, 1951, claimed 45% symptomatic cures and 10% with continued marked improvement in 53 children with atopic eczema. These claims were based on a two year period of observation after treatment. The latter was principally directed to the psychotherapy of the mother, and the alteration of the maternal rejection attitude and the environmental situation. Rogerson, 1939, and Woodhead, 1946, also claimed excellent results in atopic children by manipulation of the environment, and psychotherapy to the parents. Calnan and O'Neill, 1952, observed significant improvement in 6 out of 7 patients with acne necrotica treated by supportive psychotherapy.

These reports, if not a fully comprehensive bibliography, are representative of the results obtained with the usual psychiatric approach. It must, however, be pointed out that Stokes with the advocacy of his 'D.G.A.D.', (Don't give a damn), policy for

living, claimed to have revolutionised the outlook in conditions such as Rosacea, 'where standards were high associated with a compulsive drive to attain same'. This policy for treatment involved essentially the cultivation of a more philosophical attitude to life on the part of the patient and the manipulation of the environment to reduce stress and attain greater personal relaxation.

Psychiatric treatment is then essentially based on psychotherapy, supportive or analytically orientated. Reports with a more original outlook on treatment include that of Klein, 1949, who treated 13 cases of neurodermatitis by group therapy coupled with individual psychotherapy. Of these, 12 patients were improved to the extent of total clearance of their skin disorder. A follow up of 5 patients who were completely symptom-free revealed relapse in one. Seitz, 1953, on the hypothesis that psychocutaneous excoriation syndromes were a means of expressing repressed aggression, treated 25 patients by encouraging the mobilisation of such aggression. Of 13 patients who completed the course of 12 psychotherapeutic sessions, only one had not achieved remission of their skin disorders. However, follow-up studies over one year showed a strong tendency to relapse. The author considered the treatment unsuccessful in 19 of the 25 cases.

This work deserved a better fate as a painstaking effort to therapeutically apply a psychodynamic concept of the neurodermatoses which receives much support.

More physically orientated methods of treatment require only brief mention. Most important of these are the abreactive

techniques described by Shorvon and co-workers, (1950). Using varying methods of abreaction they claimed that out of 50 patients with varying neurodermatoses, the skin condition cleared completely in 21 cases, and was greatly improved in 23 others. The beneficial effects of same appeared to be derived from the relief of tension and was independent of the emotional material abreacted. Narcosis has also had its protagonists, (Beinhauer, 1948; O'Donovan, 1950), mainly as a symptomatic relief for pruritus. Beinhauer's claim of 75% significantly relieved of pruritus in a mixed group of neurodermatoses, is not in keeping with the results of a similar study by MacCormac, 1946, who found little benefit from this treatment. Sargant, 1951, and 1953, claimed substantial improvement from the use of leucotomy in intractable neurodermatoses.

In assessing these findings on the results of psychiatric treatment in the neurodermatoses, three major difficulties arise. Some reports tend to consider the neurodermatoses as a group and do not attempt to differentiate between dermatological syndromes. In those analytically orientated the aim of cure is not simple relief of skin symptoms but a major readjustment and reorientation of the personality. Relapse to them would mean a further failure of adjustment and not necessarily a recurrence of the skin condition. This illustrates the second major difficulty in assessing results, the lack of fixed criteria for what constitutes a cure or a recurrence. The third difficulty, too frequently found, is lack of follow-up data. However, whatever index of therapeutic cure is used, one can surely say from this brief

survey of relevant literature that psychiatric treatment in its many forms may be of very great benefit in a substantial number of cases. What is lacking, to this author's mind, is a clear appreciation of the neurodermatoses most suitable for treatment; the factors which bias prognosis; and the most suitable methods of treatment to employ. An attempt to answer these questions is made in the discussion on this section of the work.

Chapter 2

Methods of Treatment

In the majority of cases treatment was on an outpatient basis. The essential nature of this was psychotherapeutic, with the use of sedatives in small doses where tension, anxiety and sleeplessness were prominent features. A nightly hypnotic was of value where nocturnal irritation and excoriation were prominent. The hypnotic usually diminished the pruritus and reduced the tendency to scratch during the night. For the patient worried by nocturnal excoriation, the diminished tendency to same was a considerable reinforcement to his morale, and augmented his faith in the psychiatric approach.

The initial interview was usually diagnostic, and subsequent interviews psychotherapeutic. However, it soon became clear that a large wastage of patients occurred, in that a substantial number did not reappear after their first visit. Many patients resented being sent to a psychiatrist for a skin condition, and unless a hopeful impression was made on them at the initial interview, ceased to attend. Others came to psychiatry as a last resort and if immediate results were not forthcoming, they soon abandoned hope. Further, weaned to varieties of ointments, pills, and medicines at the good offices of the dermatologists, they could not understand as treatment the simple psychiatric interview. It therefore soon became clear that the initial interview must not only be diagnostic, but also to however limited an extent, therapeutic. The author endeavoured to overcome this difficulty by terminating the interview with a clear description in lay terms of the physiological disturbances underlying the

skin reaction and the manner in which it was linked with emotional disturbance. The rationale of treatment was explained in simple terms so that the patient could fully appreciate what was intended, and his role in the therapeutic situation. The prescribing of simple sedatives or other indicated drugs helped to reinforce their new-found belief that psychiatric treatment was a form of medical treatment which might help them, and not an esoteric brand of philosophy or unintelligible dialectics. The most satisfactory relationship was obtained where the patient felt he could help himself by his active cooperation in the treatment situation.

The subsequent psychotherapeutic interviews varied in number and frequency, but were usually not less than two, at intervals of 2-4 weeks. Again, considerable wastage of material occurred in the course of the early psychotherapeutic interviews and one had to continually reinforce the patient's belief in psychotherapy. Some expected a magical cure from this new line of approach and were disappointed when none was forthcoming. Others would give up attending when a further exacerbation would convince them that they were wasting their time. A number would resent psychiatric probing and discontinue further attendances for this reason. It was found better in most cases not to subject the patient to too many psychotherapeutic interviews, but to discharge once a substantial improvement in the skin condition and general adjustment of the patient had been obtained. The possibility of further recurrences was particularly emphasised on discharge, the patient then being fully aware of the influence of acute anxiety in aggravating an exacerbation of the skin condition to become one

of major degree. They were advised to work out the cause of each exacerbation where possible, in terms of stress, and to take steps to counteract or avoid same. This was particularly effective in cases of non-specific stress as in the busy harassed executive who whenever his dyshydrotic pompholyx began to flare-up, would take a day or two off work and relax and so avoided any major exacerbations. Dyshydrosis patients in particular had to be shown the importance of leaving their work worries behind them and the cultivation of suitable leisure pursuits. The important point was to readjust the patient's orientation to their skin conditions so that they could accept a recurrence as an indication of current stress and therefore of a temporary, transient, nature. In this way the aggravating effect of acute anxiety was avoided.

The type of psychotherapy employed varied with the case and the doctor. In some patients the approach was principally cathartic, with the patients freely allowed to ventilate their emotional difficulties. Again a more intellectual casuistic method was used in others. From this author's point of view the technique of psychotherapy was adapted to the patient's personality and adjusted to their reaction to treatment. The ventilation of suppressed emotions was encouraged, but where the patient's intelligence and insight would allow it, a clear understanding of the factors and mechanisms involved was made apparent to them. To the intelligent reasoning patient a purely passive abreactive attitude appeared inadequate. Those of lesser intelligence were usually satisfied with more superficial explanations in lay terms and were greatly aided by free expression of their emotions and

discussion of their difficulties. In no case was an attempt made to probe deeply into unconscious mechanisms. The more intelligent were made to understand their basic maladjustments and shown the interaction of same with life stresses to provoke the skin reactions. They were made to see how their adjustments could be improved and sources of stress more competently dealt with. Where necessary and practicable, manipulation of the environment was advised to avoid undue stress. This latter was of obviously greater importance in those whose intelligence or lack of insight barred them from greater self-knowledge. Reassurance as a form of psychotherapy was completely useless in all but the most highly suggestible.

The modus operandi for inpatients was precisely similar except that physical methods of treatment were used as an ancillary measure. The physical method of treatment which proved of most value was a modified course of insulin treatment. After early experience of inpatient treatment of the neurodermatoses this became established as a routine. The course of insulin treatment usually lasted five weeks, with a maximum insulin dose of 100 units. The sweating which accompanied the insulin reaction appeared to have no detrimental effect on the skin condition. However, to prevent undue worry, this was pointed out to the patient before commencing the course. In order to assess the direct effect of the insulin, psychotherapy was not usually begun until near the end of the treatment when a substantial improvement was usually already present. This in many cases was supplemented by exploratory and abreactive sessions

using intravenous methedrine, or ether inhalations. Abreactions were usually deferred until it was clear that modified insulin and psychotherapy were not producing an adequate effect, or that a greater degree of improvement might yet be obtained. E.C.T. was used on four patients with depressive features, when other methods of treatment had failed. In all cases it produced a moderate degree of benefit. Narcosis, with Sodium Amytal, and paraldehyde, was infrequently used at first, but later when the trends of reaction to treatment became clearer, it was employed more frequently. Its main value was in initially settling down an agitated, anxious patient. Such emotional disturbance was occasionally seen when a patient was first admitted to the ward. If started on insulin treatment in this frame of mind, one could be sure they would not benefit. A preliminary period of 10-14 days narcosis overcame this difficulty and then insulin and psychotherapy usually proved effective. In a small number of cases where the effect of insulin treatment had not been great, a subsequent narcosis appeared of considerable value in producing a further material improvement in the patient's skin condition. Narcosis alone, tended to diminish the skin irritation but in no case was a major therapeutic success obtained in this way. The local treatment of the skin condition was important from the viewpoint of the relief of disturbing symptoms. It was little use attempting psychotherapy on a patient with a highly irritating skin lesion.

Psychotherapy was of the same flexible type as used in outpatient treatment, although more time was available and the situation conducive to a more intensive approach to the patient.

The results of treatment are now tabulated and described.

Chapter 3

Findings

For the purpose of this thesis, the findings of the results of treatment are confined to the nine diagnostic groups already utilised in the clinical analysis. In all, a total of 158 patients in these groups attended the psychiatric outpatient clinic and 46 were treated as inpatients at Whitchurch Hospital. In the latter group were included two patients who relapsed after apparently successful outpatient treatment, and were subsequently admitted to hospital.

Not all patients were accepted for psychotherapy. Twenty-six outpatients, 16%, were rejected as unsuitable for various reasons. These included practical difficulties in attending; poor intellect; unmodifiable environmental stress; and the absence of adequate psychogenic features other than reactive to the skin disorder. A further 19 patients, 12%, ceased to attend after the initial interview. Their reasons for so doing were investigated by a postal questionnaire sent to them. Of 7 who replied, 4 stated their skins had improved after their initial interview and they felt further treatment was no longer necessary. The others considered that psychiatric treatment would not help them. A further wastage tended to occur with subsequent interviews. This was much less marked and from a scrutiny of the postal questionnaire findings, appeared dependent principally on symptomatic improvement, coupled with the inconvenience and long wait associated with attending this busy outpatient clinic; and to a lesser extent on loss of faith in psychotherapy. A total

of 112 cases (72%), were considered to have been discharged after satisfactory treatment, or, if they had lapsed in their attendance, to have received sufficient treatment for a therapeutic result to be assessed.

The results of treatment were then assessed in the following categories:-

- (1) Recovered:- Clearance or virtual clearance of skin condition with no recurrences other than of minimal degree.
- (2) Significant improvement:- Considerable improvement in the rash with recurrences much less frequent and severe. This included cases where the skin disorder cleared completely but tended to recur, if the recurrences were less intense and severe.
- (3) Minor or no improvement in the skin disorder, or the frequency and severity of the exacerbations.

The improvement in the adjustment of the patient was considered as a separate entity as in a few cases an improvement in the former was not associated with significant change in the skin reaction. A modification of this was made in appraising the inpatient results. As most of them exhibited acute neurotic symptoms when admitted, they were adjudged in terms of their improved psychiatric state. This also implied as improved general adjustment. The change in adjustment sought in all cases was (i), to their personal or environmental difficulties; (ii), to their personality inadequacies; and (iii), to their skin reaction. A significant improvement in adjustment was accepted if a reasonable change was obtained in (i) and (iii).

For inpatients, the results of treatment were analysed for each physical method of treatment. As narcosis, E.C.T., and

abreactions were used only as ancillary measures, and produced no direct recoveries, they were considered in terms of the degree of improvement obtained.

The total reactions to outpatient and inpatient treatment were expressed as a percentage of the total number of patients seen in each diagnostic group. In the case of outpatients, this ^{was} ~~is~~ an unbalanced assessment as a varying proportion in each group were regarded as unsuitable for psychotherapy. A corrected incidence of therapeutic benefit in terms of those deemed to have had adequate treatment were therefore also estimated.

Of the total of 158, outpatients 76, (47%), were considered to have recovered or been significantly improved by treatment. Of these, 74 were chosen for follow-up, by means of a postal questionnaire, personal inquiry, or their record of follow up supervision at the outpatient clinic. It was possible to assess their continued welfare in all but 4 cases. The minimum follow-up period was 6 months; the maximum, over 2 years.

The relapse rate was assessed in terms of major exacerbations sufficient to require further medical aid. A total of 12 outpatients were considered to have significantly relapsed, all within one year of discharge or lapse from psychiatric treatment. Thus of the neurodermatoses referred to this clinic, other than those admitted to hospital, 60 patients, (41%), were assessed as recovered or significantly improved, for a follow-up period of 6 months to over 2 years. In terms of those accepted as suitable for outpatient psychotherapy, the comparable figures were 66% for initial recovery or improvement, and 57% showing sustained improvement during the follow-up period.

These figures for improvement are probably biased on the low side. No cognisance is taken of the therapeutic reactions of those who ceased to attend after the first interview even though at least four are known to have improved. Again, minor improvements in the skin reaction were not accepted as of significance. These cases were not followed up and as many of them lapsed from attendance, it is possible that a number showed subsequent improvement in their skin conditions.

The figures quoted then are minimal assessments of the beneficial results of psychotherapy.

They are tabulated in Tables 6, 7 and 8.

TREATMENT FINDINGS

Tables 6, 7
and 8

(Initial letter or letters are used to designate
diagnostic groups, (and controls, (C).)

Table 7. Analysis of results of treatment (in-patient).

| (No. of patients) | R. (2) % | U. (5) % | D. (9) % | P.A. (6) % | P.V. (0) % | P. (3) % | S. (8) % | A.E. (4) % | N. (9) % | Total 46 % |
|--|----------------|----------------|----------------|------------------|------------------|----------------|----------------|------------------|----------------|------------------|
| <u>MODIFIED</u> (1) Recovered | 50 | - | 56 | 17 | | 33 | 25 | - | - | 22 |
| (2) Significant improvement | 50 | 40 | 33 | 33 | | 33 | 50 | 75 | 67 | 48 |
| <u>INSULIN</u> | 100 | 40 | 89 | 50 | | 67 | 75 | 75 | 67 | 70 |
| <u>TOTAL</u> | | | | | | | | | | |
| <u>NARCOSIS</u> | | | | | | | | | | |
| (1) Significant improvement. | | | 11 | | | | 12 | 25 | 33 | 13 |
| (2) Little or no improvement. | | | - | | | | 12 | - | - | 2 |
| <u>E.C.T.</u> | | | | | | | | | | |
| (1) Significant improvement. | | | | 17 | | | 12 | 25 | 11 | 7 |
| (2) Little or no improvement. | | | | - | | | 1 | - | - | - |
| <u>Improved</u> (1) marked | | 40 | - | | | | - | 50 | - | 9 |
| <u>by</u> (2) moderate | | 20 | 33 | | | | 25 | - | 22 | 17 |
| <u>reactions</u> (3) no improvement | | 20 | - | | | | - | - | - | 2 |
| <u>Total reaction to treatment</u> | | | | | | | | | | |
| (1) Recovered | 50 | - | 67 | 17 | | 33 | 37 | 25 | 11 | 30 |
| (2) Major improvement | 50 | 40 | 33 | 33 | | 33 | 25 | 25 | 33 | 33 |
| (3) Moderate improvement | - | 20 | - | 17 | | - | 25 | 50 | 33 | 19 |
| <u>TOTAL</u> | 100 | 60 | 100 | 67 | | 67 | 87 | 100 | 77 | 82 |
| <u>Relief or significant improvement of psychiatric state.</u> | 50 | 60 | 100 | 50 | | 67 | 62 | 100 | 56 | 70 |

Table 8.

Analysis of results of treatment - follow-up

| Out-patients (no. of cases). | | R. | U. | D. | P.A. | P.V. | P. | S. | A.E. | N. | Total. |
|---|-----------------------|-------------|------------|------------|--------------|-------------|-------------|------------|-------------|--------------|---------------|
| <u>Not relapsed</u> (duration of follow-up) | (1) 6 months - 1 year | 12 | 6 | 8 | 8 | 5 | 4 | 7 | 4 | 20 | 74 |
| | (2) Over 1 year | 6 3 | 4 1 | 4 3 | 4 2 | 4 1 | 1 2 | 3 3 | 1 2 | 9 5 | 36 22 |
| | Total. | 9 (75%) | 5 (83%) | 7 (87%) | 6 (75%) | 5 (100%) | 3 (75%) | 6 (86%) | 3 (75%) | 14 (70%) | 58 (78%) |
| <u>Major relapse</u> (interval before relapse) | (1) Less than 6 mths. | 1 | - | - | 1 | | | 1 | 1 | 2 | 6 |
| | (2) 6 months - 1 year | 2 | 1 | 1 | - | | | - | - | 2 | 6 |
| | (3) Over 1 year | - | - | - | - | | | - | - | - | - |
| Total. | | 3 (25%) | 1 (17%) | 1 (13%) | * 1 (12%) | 0 | 0 | 1 (14%) | 1 (25%) | * 4 (20%) | * 12 (16%) |
| In-patients (no. of cases) | | 1 | 3 | 8 | 4 | 0 | 2 | 6 | 3 | 7 | 34 |
| <u>Not relapsed</u> (duration of follow-up) | (1) 6 months - 1 year | 1 | - | 4 | 2 | | 1 | 3 | 1 | 2 | 14 |
| | (2) Over 1 year | - | 1 | 3 | 1 | | 1 | 2 | 2 | 2 | 12 |
| | Total. | 1 (100%) | 1 (33%) | 7 (87%) | 3 (75%) | | 2 (100%) | 5 (83%) | 3 (100%) | 4 (57%) | 26 (76%) |
| <u>Major relapse</u> (interval before relapse) | (1) Less than 6 mths. | | 1 | - | | | | 1 | | 1 | 3 |
| | (2) 6 months - 1 year | | 1 | 1 | | | | - | | 2 | 4 |
| | (3) Over 1 year | | - | - | | | | - | | - | - |
| Total. | | 0 | 2 (67%) | 1 (13%) | * 0 | | 0 | 1 (17%) | 0 | 3 (43%) | * 7 (21%) |

* = follow-up not complete.

Chapter 4

Discussion of Findings

Of those patients accepted as suitable for psychotherapy, a significant improvement in the skin condition was found in 66% of cases. Where the psychotherapy has been intensive or long continued this improvement rate was even more marked. Confined to those who had attended the Outpatient department on four or more occasions, 84% showed significant improvement. The number of therapeutic sessions required to obtain this beneficial response, varied from case to case and from doctor to doctor. It was impossible to forecast the duration of psychotherapy required to produce adequate improvement. The relapse rate was not significantly high, 16%, and one could anticipate that at least 50% of those patients treated by psychotherapy would remain well for a prolonged period. When one considers that the majority of these patients were referred to the psychiatrist because of their lack of response to dermatological treatment, it is clear that a considerable measure of success was achieved by these brief, superficial, psychotherapeutic measures.

A complication in assessing the results of treatment was the tendency to minor recurrences. They were disregarded for purposes of this study, as they were not incapacitating or disturbing to the patient. A number of cases reported their skin reaction as persisting or recurring in a small localised area, in marked contrast to its former dimensions. It was of interest to note the changed attitude of the patients to this local condition. They accepted same quite philosophically, and were content to apply a salve or other symptomatic treatment and

await the disappearance of the irritation. They appeared to accept the association between the skin reaction and worry or other upset and to realise that the skin would settle down as the anxiety disappeared or the associated stress was relieved. By far the majority of patients reported that they felt much better in themselves following psychotherapy and their outlook had considerably altered. Even where the skin had shown no marked change, many still reported an improvement in their adjustment. Of interest were the reactions of three patients who denied that psychotherapy had helped them in any way, but whose skin reactions had cleared up for the first time shortly after discontinuing their visits to the outpatient department. In addition they described how they had altered their attitude to their skin condition, which they claimed was the beneficial factor in producing the desired effect.

As can be gleaned from the tables and from the above, complete clearance of the skin condition was infrequent but a number appeared to progressively clear after psychotherapy had been discontinued. Major recurrences in some cases were associated with a new phase of emotional disturbance. In the majority, however, the probable cause was the persistence of a difficult environmental situation or a continued personality maladjustment. The latter group generally broke down within six months of cessation of treatment and could be improved again by further psychotherapy. The group with irreconcilable conflict or environmental difficulty usually broke off further psychiatric attendance or was refractory to further treatment.

From the tabulated findings, the groups most susceptible to outpatient psychotherapy appeared to be generalised or localised pruritus, pruritus ani and neurodermatitis. This is possibly an artefact in the case of the first named group as the number of cases was so small. In addition three of these patients had a complicated psychopathology and received intensive psychotherapy. Those cases which appeared to benefit least from psychotherapy were pruritus vulvae and atopic eczema.

The prognostic indicators in all cases were not so much the skin reaction as the psychiatric picture. The cases in general could be divided into three groups. Those with an uncomplicated stress reaction could usually be relieved by alleviation of the stress circumstances and by simple psychotherapy. Where there was considerable psychopathology or a fair degree of personality maladjustment conditioning the reaction, patient psychotherapy in many cases produced dramatic improvement. Cases which were least amenable to psychotherapy were those where the skin condition was involved in a conversion hysteria reaction; where there was evidence of gross chronic neurosis and particularly hypochondriasis existing for many years; or where the personality maladjustment was extremely severe. In effect, within certain limits the prognosis could be judged on the same grounds as that in assessing any psychiatric case. The duration or severity of the skin condition, again within limits, was no criterion of the likely response to treatment. However, other factors might also intervene to effect the prognosis. For example, in the pruritic disorders the presence of a non-pruritic local lesion tended to bias the outcome adversely by providing a focus for

phobic anxiety or continually attracting the patient's attention to the area. Similarly, a difficult environmental situation which could not be altered was not conducive to relief of the skin reaction.

The patient's skin diagnosis was an important guide to psychotherapy. In Rosacea, psychotherapy was principally aimed at the personality maladjustments, especially in the social sphere, and at the patient's reactions to their skin disorder. Anxiety factors were relieved as far as possible; difficulties were discussed; guilt feelings, hostility feelings, or other disturbing emotions were ventilated as freely as possible. However, in the many cases where personality maladjustment was considerable, none of these factors appeared to produce the same beneficial effect, if not accompanied by psychotherapy aimed at improving such adjustment. The effect of continued stress on their skin condition was made clear to them and they were encouraged to withdraw from stressful social activities until their skin had improved. One important point in female patients was the use of a suitable cosmetic application to conceal their skin disfigurement. In one case the effect of this manoeuvre was to produce the dramatic disappearance of a Rosacea present for many years. It recurred but with lesser severity and the patient was much happier as she was no longer afraid to face the public gaze. This was a simple step but one which the patients had hesitated to take for themselves as they were afraid they might further harm their skins by such applications. Their resultant increased happiness and self-confidence was considerable and a

valuable aid to the development of a profitable therapeutic relationship.

Particularly important in Rosacea was an alteration in the attitude to the skin condition and an acceptance of the latter, as progress tended to be slow. Except in the occasional case, one could anticipate little improvement in less than several psychotherapeutic sessions. As a group they were on the whole receptive of psychogenic explanations and cooperated well in therapy. Part of their slowness in improving was due to their inhibited constrained personalities and the consequent difficulty in establishing rapport. In the one case in the author's personal experience which was a complete therapeutic failure, it was found impossible to penetrate this wall of constraint and a satisfactory therapeutic relationship was never established.

The results of outpatient treatment were satisfactory if not brilliant. Of those who attended after the initial interview, 71% were materially benefitted. Of this latter group, 25% tended to relapse. The relapse was infrequently associated with further environmental stress and seemed more a reflection of the stress incumbent on the personality maladjustment.

Inpatient treatment was much more rapid in its effects. Only two patients were so treated and with modified insulin their skin conditions cleared in a matter of weeks. To better assess the effect of the insulin, no psychotherapy was given until the end of the course. By this time, in each case, the face was cleared or almost cleared and has not recurred since. However, the length of time since discharge was inadequate for follow-up purposes in one patient.

Psychotherapy in dyshydrosis tended to be on a rather different level. The majority of these patients had a good or adequate personality background. Their reaction was usually a stress one in an overconscientious, over-anxious, individual. The best approach in these cases was to try and reduce their exposure to strain by manipulation of their environment, personal and occupational. It was essential that the patient have a clear view of the relationship between the ordinary stresses of life and the skin reaction. Many found difficulty in realising that their ordinary life was a cause of stress and in the absence of major factors of emotional disturbance tended to be rather sceptical of the psychiatric approach. However, once the apprehensive attitude of the patient to his skin condition had been altered and an understanding of the aetiological factors had been obtained, early remission of symptoms could be reasonably anticipated. In some cases, psychopathological disturbance also had to be resolved. However, in most patients this was not prominent, and the anxiety reaction many of them displayed was essentially secondary to their skin condition and the effect of same on their lives. They were made to seek out causal stress factors when an exacerbation occurred and to relate them to their skin condition. The main approach was to make them accept their skin reaction as a barometer of their emotional tension and to take steps to diminish such tension when significantly present.

The overall results of outpatient treatment were fairly good, with 62% of those treated, recovered or significantly improved.

The relapse rate was 13% of those so benefitted.

The incidence of therapeutic success in the outpatient treatment of dyshydrosis must be further qualified. Those cases where pompholyx was absent or infrequent, and the main disorder was that of essential hyperhydrosis were most refractory to treatment. The major therapeutic successes were secured with the dyshydrotic pompholyx patients and the greatest number of failures were cases of essential hyperhydrosis. This is understandable in the author's view, in that the latter is essentially a conditioned reflex, and symptomatic of a long standing personality maladjustment which is relatively inaccessible to superficial methods of psychotherapeutic treatment. In some hyperhydrosis cases where the overlay of anxiety was great and psychopathological situations present which could be resolved, some degree of improvement could be obtained. However, these cases were very much in the minority.

The inpatient treatment of dyshydrotic pompholyx was extremely successful. Of all the skin conditions treated in hospital, the prognosis was best in this group. On a course of modified insulin treatment one could forecast an almost 100% recovery rate, with little or no psychotherapy or other forms of treatment. In a few instances where minimal lesions persisted, modified insulin was followed by abreaactions with methedrine or ether, but the further degree of improvement was not marked. A follow up of dyshydrosis inpatients revealed significant relapse in only one case, associated with severe environmental stress.

The pruritic disorders reacted fairly well to outpatient psychotherapy with the exception of pruritus vulvae. Where

the latter was based on an hysterical reaction to sexual maladjustment the prognosis was extremely poor. Cases of pruritus vulvae associated with a stress situation and an anxiety reaction could usually be significantly improved or the pruritus eradicated. This was providing that the sexual maladjustment, if present, was not severe or at least had been reconciled and was not potentiated by the mechanism of conversion hysteria. Non-pruritic local lesions tended to bias the prognosis adversely by providing a focus for the patient's anxiety or for their conversion reaction. A similar statement was also true of the other pruritic disorders, particularly pruritus ani. Where the latter occurred in a setting of treatable anxiety, and the patient was amenable to psychotherapy, the prognosis was good. The prognosis was bad where the pruritus ani was part of a long standing maladjustment and maladaptation, distinguished by numerous somatic complaints or by hypochondriasis. The length of history did not matter greatly. In one successfully treated case the history was of 12 years standing and there has been no recurrence in the follow-up period of 2 years. A history of marked obsessional traits does possibly tend to influence the prognosis adversely. The foci for psychotherapy are the phobic anxieties regarding health so often displayed; the removal or relief of other anxiety provocative situations or conflicts; and readjustment of the personality where indicated. The expression of hostility and resentment is freely encouraged. Maladjustments of personality are less prominent in pruritus ani

than in other forms of pruritus. The essential of psychotherapy would appear to be the relief of anxiety in its varied forms and the free expression of hostile feelings. The patient should be made aware of all factors, psychological and physical, which are operative in this skin reaction.

Other forms of pruritus are treated in a similar matter to those already described.

It is important to consider the localisation of the pruritus in view of possible psychopathological associations but in most cases these appeared to be lacking.

It is doubtful if the inpatient treatment of pruritus is significantly better than outpatient psychotherapy. By relief of anxiety and tension by physical methods of treatment obviously a greater amount of good should accrue. The comparable figures were 73% and 80%, recovered or significantly improved, for pruritus ani and pruritus respectively for outpatient treatment, as against 67% respectively, as inpatients. The relapse rates differed little and were low. However, these figures were biased in that the inpatients included a number with intractable chronic neuroses.

The outpatient treatment of urticaria, seborrhoeic dermatitis and neurodermatitis followed no specific lines. They were treated on general principles with the main concentration of psychotherapy being on the relief of stress, the resolution of superficial conflicts and an attempted readjustment of the personality where indicated. In most cases of seborrhoeic dermatitis personality maladjustment was considerable, and on

a par with that in Rosacea. Treatment of same was less successful than in Rosacea, possibly because of the hostile, sceptical, attitudes the seborrhoeics appeared to display. Apart from the general psychiatric treatment, it was found most essential to attempt to alter the patient's apprehensive, anxious, shameful, attitude to his skin condition.

The results of outpatient treatment are fairly good in seborrhoeic dermatitis. They can be improved by inpatient treatment. While modified insulin was again of therapeutic value, it did not have the dramatic effect observed in other conditions. In a considerable number of cases insulin produced a remission or complete disappearance of symptoms. In almost all cases there was a significant improvement in the skin condition, but a number relapsed after the insulin had been discontinued. This was followed up by narcosis or other forms of treatment. Psychotherapy was as already described for outpatients, again an essential point being to alter the patient's reaction to his skin condition. Once the patient realised the association between his skin and stress situations and accepted that the former would settle down with relief of stress, improvement could be anticipated. It was important to make the patient realise that a considerable part of such stress was derived from his over-anxious attitude to his skin. If this understanding was not obtained, relapse was almost invariable irrespective of the subsequent degree of stress encountered. One point which biases the findings for seborrhoeic dermatitis is that seborrhoeic dysfunction is not entirely dependent upon psychological

disturbance. Therefore one would not anticipate as marked or sustained an improvement as with certain other forms of neurodermatitis. This is in accord with the findings as recoveries were infrequent, and the improvement obtained probably not as great as in other conditions. However, it is of some relevance that major relapses were an unusual occurrence.

The urticarias responded only moderately to inpatient or outpatient treatment. Again the approach was a general psychotherapeutic one, and there were no specific foci for attack. The main value of psychotherapy lay in the relief of their attacks by resolution of conflicts, and the elimination of anxiety or resentment producing situations. As a group they either cleared up rapidly with relatively simple measures, or were extremely resistant to treatment.

The cases of neurodermatitis were a more polyglot group than the other conditions described. Treatment, therefore, had to be widely based and was dependent upon the individual psychopathology or stress reaction. Again one was dealing in many cases with a skin which was reactive not only to psychological stress but had become sensitised to other environmental changes. The personality pattern showed no constant deviations. Psychopathology where present varied enormously. Stress was active in many shapes and forms. Therefore treatment took into account this great variety of circumstances and conditions, and each patient was treated entirely as an individual. The site of the lesion in the more localised forms of neurodermatitis was not of considerable help in the elucidation of psychopathology. However,

in some cases it was related to the particular psychological conflict and then psychotherapy could be aimed strongly in that direction.

The prognostic factors again were entirely individual and depended to a large extent on the degree and nature of the psychiatric disturbance present. Where excoriation was prominent in a hysterical setting, the prognosis was very poor. Similarly, where the skin was reactive to a large number of different conditions, of which psychiatric disturbance was only one, the prognosis was adversely biased. The most suitable cases for psychotherapy were where the skin condition was a reaction to severe stress or psychopathological disturbance.

Inpatient treatment was usually restricted to cases refractory as outpatients, or where the severity of the reaction contra-indicated outpatient treatment. Therapy was along the usual lines of modified insulin and ancillary measures with psychotherapy playing a prominent part. The reaction to inpatient treatment was good considering the material, as many patients were long standing cases of neurodermatitis with widely disseminated skin lesions. The prognostic factors were as already mentioned. Where the personality was adequate, the stresses relievable or conflicts reconcilable, and the patient's attitude to his skin could be altered in the direction already described, the prognosis was good. The failures were encountered where the patient was unwilling to accept psychotherapeutic explanations and obtain a better insight into the relation between his skin and the psychiatric disturbance; where the personality

maladjustment was so great that the patient could not face a return to his social and personal difficulties outside hospital; or where a conflict situation persisted which could not be relieved or resolved by any means. In such patients any form of treatment usually produced some improvement but the cessation of treatment tended to produce exacerbations or the latter occurred shortly after discharge from hospital. In those patients with a good background and the skin condition ~~was~~^{NOT} completely chronic, the severity or extent of the skin disorder did not matter greatly and the prognosis was usually good. Such patients maintained their improvement after discharge from hospital.

The atopic eczema group proved difficult to treat as outpatients. They tended to be sceptical of psychotherapy and a number ceased to attend after a very short period of treatment. They had come to accept their skin conditions as ineradicable and appeared to have little faith that any form of therapy would produce a lasting improvement. Some patients, on the other hand, did improve with superficial short psychotherapy, but the best results for the treatment of atopic eczema were obtained as inpatients in hospital. Modified insulin did help them to some extent, but subsequent abreactions usually produced a much greater degree of improvement. The abreactions were utilized to allow the patient to freely ventilate the hostility to parents which tended to dominate their psychiatric picture. Psychotherapy directed to this focus appeared to have a much lesser effect. They had to be stimulated by the abreactive technique to emotionally

release this accumulated tension and hostility. It is possible the improvement obtained was derived from the simple relief of tension, rather than that the material abreacted was specific to produce same. Psychotherapy was also directed to the improvement of the personality maladjustment, mainly in the social setting, which tended to accompany this condition, particularly if the latter dated from infancy. Fortunately the atopic eczema patients displayed a fair amount of drive to better health and one was aided by their youthful, active-minded, attitude to their problems.

Modified insulin proved most effective in the inpatient treatment of most psychogenic skin conditions. In no case did it aggravate same despite the sweating which is induced by this treatment. It could be argued that the beneficial response was produced by the therapeutic situation rather than by the treatment itself. In dyshydrosis the response seemed almost a specific one. However, as in such cases the main stress was often occupational or environmental, the removal from same to a sheltered hospital existence may have played a considerable part in their improvement. In the other skin conditions the effect was less dramatic but the improvement in their general health and the relief of anxiety and tension was a material aid to further progress in every case. It may be that the principal effect of insulin treatment is exerted in this latter way, but recent publications suggest that insulin hypoglycaemia is associated

with an adreno-corticotrophic response, (Weitzner, 1952).

Whether cortisone therefore or allied substance would produce a similar degree of improvement in the same setting is a debatable point. E.C.T. and narcosis were effective ancillary measures but in the author's experience of little use alone. This is possibly not in keeping with the experience of others, as personal communications from colleagues have informed the author of the relief, particularly of exfoliative skin disorders, by electrical convulsive treatment. Abreactions, so effective in the hands of Shorvon proved less useful in this group of skin conditions treated as inpatients. However, one cannot compare the results as Shorvon's treatment was mainly in the outpatient setting and probably included a number of cases of lesser severity than those treated here.

The figures for significant improvement as outpatients are somewhat better than those advanced by Cormia. They compare well with other statistics quoted for outpatient recovery or improvement rates. There are no comparable figures known to the author for the results of inpatient treatment.

One can sum up this section in that psychiatric treatment can materially, and probably permanently, benefit a large proportion of the cases referred to the psychiatrist by the dermatologist. The diagnostic group with the best prognosis would appear to be dyshydrotic pompholyx, excluding those cases where associated hyperhidrosis is severe and long standing. Those dyshydrotic patients who do not react readily to outpatient

treatment should be admitted to hospital for a course of modified insulin, with an excellent prospect for full recovery. Similarly, atopic eczema appears to carry a poor prognosis for outpatient treatment but the outlook is much improved if treated by abreactions, probably most effectively in hospital. In the other groups, outpatient treatment is probably adequate, with a fair prospect of success in other than pruritus vulvae in a hysterical setting. Those with a severe, disabling, lesion are best treated as inpatients.

The essential of treatment in all cases, other than in possibly dyshydrosis, is psychotherapy aimed at the main conflict situations, the personality maladjustments, and the attitude of the patient to his illness. Even without other alteration in the personality adjustment, the acceptance of the skin condition with understanding and diminished anxiety, will tend to make recurrences less frequent and less severe.

Each patient is an individual and therefore the lines of treatment laid down above can only be broadly applied. The basis of all psychiatric treatment in the neurodermatoses is psychotherapy. This can only be effective when each patient is understood in his own individual setting of reaction.

PART V.

SERUM ASSAY FOR ACETYLCHOLINE

- Chapter 1. Introduction**
- Chapter 2. Procedure and findings**
- Chapter 3. Discussion of findings**

Chapter 1. Introduction

This study was devised to test the hypothesis that acetylcholine was present in small amounts in the blood of Rosacea patients and was responsible for the persistent facial vasodilatation. The hypothesis was formulated on the following propositions.

(1) Localised vasodilatation in the blush area of the face is the basic physiological disturbance in Rosacea.

(2) This persistent flush is due to capillary and arteriolar vasodilatation.

(3) A life-long tendency to blushing is aetiologically associated with the development of Rosacea.

(4) Rosacea is a stress phenomenon and thereby related to the autonomic or endocrine changes associated with the latter.

(5) The facial flushing is due to increased sensitivity of the facial vessels to circulating acetylcholine.

The basic importance of facial vasodilatation in the production of Rosacea has already been discussed, (Page 8). The associated seborrhoea does not seem of aetiological importance and may be secondary to the vascular changes. The skin of the affected area is usually red and hot, and therefore corresponds to the skin appearances associated with arteriolar and capillary relaxation, (Wright, 1952). The peripheral arterioles are maintained in a state of tonus by sympathetic control from the vasomotor centre. The tonic state of the capillary vessels is partly a passive reaction to arteriolar changes but mainly secondary to local physical and chemical causes. The amount of nervous control of capillary tone is probably small, and the state

of the vessels mainly determined by such arteriolar and local changes, (Wright, 1952). Thus where arteriolar and capillary dilatations are present together, it is likely that the cause of same exerts its influence principally on the arterioles. This is not necessarily correct, as capillary dilatation due to locally produced metabolites or other physico-chemical agents might be associated with arteriolar dilatation by a local axon-reflex mechanism. There is no evidence for such latter changes, and histamine as a locally produced vasodilator agent can probably be eliminated as the vascular changes are not associated with increased capillary permeability and exudation.

Two possible causes for the arteriolar vasodilatation in Rosacea, suggest themselves. Either there is inhibition of the tonic vasomotor control, or, a circulating vasodilator substance may be responsible.

It has been suggested that capillary tonus is low in the facial vessels in Rosacea. Klaber and Wittkower, 1939, were of this opinion as the flush from histamine injection was most marked in the face in such patients. This is however contradicted by a similar reaction to injected histamine in normal persons, Harmer and Harris, (1926). Others, including Hodgson, 1950, noted the presence of other vascular abnormalities such as perniosis in Rosacea, and considered same evidence of a general tendency to poor vasomotor control. There is no definite evidence of this and Soby, 1950, was unable to find abnormalities of tone in the facial vessels of a group of Rosacea patients tested ^{by} ~~for~~ him.

The evidence appears against alteration in vasomotor tonus

of the facial vessels, other than as possibly in synergic combination with a circulating vasodilator substance. The latter, for reasons to be given later, is believed to be acetylcholine.

The high incidence of a labile facial blush reaction in Rosacea patients cannot be denied. Statistical information is lacking, but Klaber and Wittkower observed this in 66% of their patients, and Cornia, 1951, in 89% of his small series. It has been noted in all cases of Rosacea studied by this author. The tendency for Rosacea to occur in menopausal females and for the exacerbations to be related to extraneous vasodilators support a view that facial flushing is of fundamental aetiological importance in this condition. Unfortunately, little is known of the neurophysiological mechanisms underlying blushing or flushing other than that in the majority of cases they are related to emotional disturbance or local physical causes.

The presence of this history of long-standing facial vasolability suggests an increased tendency of these vessels to react to a vasodilator agent, probably a cholinergic substance. As Rosacea is usually accepted as a stress reaction, this suggests an association with the autonomic discharge in such conditions, and related states of emotional disturbance. Gellhorn, 1953, summarised the evidence in favour of an increase in parasympathetic activity in certain emotional states. These latter were mainly aggressive feelings such as resentment and hostility, or anxiety. Bender, 1938, showed that acetylcholine was present in the blood of the monkey during attacks of rage or fear. He concluded that in these emotional states, cholinergic neurones

throughout the body were activated. Milhorat, 1947, claimed that in states of tension an 'acetylcholine-like' substance could be identified in the blood of human beings. Tower and McEachern, 1949, found acetylcholine in large amounts, persisting up to ten days, in the C.S.F. following concussion, E.C.T. and repeated epileptic attacks. This persistence of acetylcholine in the C.S.F. for a prolonged period suggested the possibility of its absorption into the blood. Crossland, 1953 and 1954, detected acetylcholine in the blood of rats and rabbits following the muscle spasms of electrical or chemically induced convulsions. He suggested, 1951, that an increased central production of acetylcholine might be associated with its appearance in the blood stream. In emotional states, as in all conditions of increased cerebral activity, the acetylcholine content of brain in rats was diminished. Crossland suggested that the blood acetylcholine content observed by Bender, was derived from central cholinergic neurones as well as peripheral.

Acetylcholine is enabled to survive in the blood for an unknown period despite the coexistence of cholinesterase. The 'pseudocholinesterase' of blood is most active in the presence of relatively high acetylcholine concentrations, and small amounts of the latter hormone remain unaffected over long periods.

Crossland has frequently detected acetylcholine in the serum of human subjects immediately following E.C.T., and occasionally also in the untreated normal subject. (Failure to detect acetylcholine in the normal subject was believed due to the low sensitivity of the assay preparation).

In Rosacea therefore it is probable the stress reaction is accompanied by increased central, and possibly peripheral parasympathetic activity, in which acetylcholine is released into the blood. It is a chronic stress reaction in which anxiety is a predominant emotion, often intermingled with resentment and hostility. Thus a predominantly parasympathetically toned physiological reaction is likely. As already pointed out, the effect of this is principally confined to the facial vessels. If these vessels had been implicated in a general activation of cholinergic neurones throughout the body, one would have expected signs of stimulation of parasympathetically innervated structures elsewhere. Other than excepting possibly for digestive disturbance, there is no evidence of this. A massive discharge of acetylcholine into the blood stream is unlikely for the same reason, and because it would tend to activate cholinesterase and so rapidly be destroyed. The fact that blood vessels elsewhere in the body are not affected, indicates a specific quality to the reaction of the facial vessels. The evidence therefore tends to suggest these vessels are sensitive to a small increase in the amount of circulating acetylcholine, secondary to the state of chronic stress.

Chapter 2

Procedure and findings

Suitable cases of Rosacea were selected on the basis of their skin conditions and their willingness to co-operate in the experiments. As long as the skin condition was sufficiently active, the associated emotional state was not considered. Each patient was linked with a normal control drawn from the hospital staff, on an equivalent age and sex basis. Usually 1-2 samples of blood were taken, the latter at an interval of some weeks. In a number of females a sample was taken weekly for four weeks to assess the possible effect of menstruation on blood acetylcholine. In each case, 20 c.c. of blood were withdrawn. This was injected into a sterile tube and immediately mixed with 0.1 c.c. of 0.1% solution of eserine sulphate, adequate to give a final serum concentration of eserine of 1 in 50,000. The blood was allowed to clot overnight in the refrigerator and the serum separated by centrifuging. The serum after preliminary adjustment to pH4 with 0.15N HCl was despatched for assay. If this latter was delayed for any reason the serum sample was frozen solid before despatch.*

Immediately on receipt of the blood, the samples were frozen solid and stored in a refrigerator, for assay when biological material and time was convenient. Two methods of assay were

* The biological assays of the serum were carried out in the Physiology Department, St. Andrew's University, under the charge of Dr. J. Crossland. For guidance in the preliminary technique of collection, and for the carrying out of the blood assays, full acknowledgment is made to Dr. Crossland's specialised interest in this subject.

used, either the frog rectus muscle or cat's blood pressure, dependent on the sensitivity of the former or the availability of cats for the latter. The identification of acetylcholine was based on the following points.

- (i) Blood plasma or serum kept at pH4 and in the presence of physostigmine sulphate, (1 in 100,000), up to the moment of the experiment, caused contraction of the isolated frog rectus muscle and depression of blood pressure in the cat.
- (ii) Blood plasma kept at a pH higher than 4 before testing had no such effect.
- (iii) The action of plasma on the frog rectus preparation was greatly increased if the latter had first been sensitised for one hour or more with physostigmine or neostigmine.
- (iv) The action on the cat's blood pressure was abolished by atropine, (2 mgs./kilo).
- (v) The same sample of plasma assayed on both the frog rectus preparation and on the cat's blood pressure, gave quantitatively similar results.

Assay details for the frog rectus preparation were as described by Crossland, 1951, with Feldberg's, (1945) precaution for the presence of sensitising substances except that neostigmine was used for sensitisation instead of physostigmine. The cat's blood pressure gave a much more sensitive preparation but was less good in discriminating between slightly differing acetylcholine concentrations. In order to make assays on this

preparation as accurate as possible, samples were taken in batches of four at a time, and the relative depressor action of each sample assayed in terms of the others. Thus, if 1.5 mls. A was more active than 2.0 mls. B., but less active than 2.8 mls. B., the acetylcholine concentration in A was taken to be $\frac{2.4}{1.5}$ that of B. Accurate assays were then made on one of the members of the batch. Relative acetylcholine values in any particular series are thus probably very reliable. All assays were done 'blind'. The animals were anaesthetised with pentobarbitone sodium which seemed to result in a very high sensitivity to acetylcholine. After every series of assays all blood samples were again reinjected into the cat, given just enough atropine to abolish the depressor action of that amount of acetylcholine thought to be present in the samples. The complete abolition of all depressor activity of the samples in this way confirmed that none of them contained an atropine-resistant depressor substance which might otherwise have been assayed as acetylcholine.

The blood in both methods was assayed against a standard acetylcholine preparation in Ringer-Locke solution. No attempt was made to assess the effect of sensitising substances in the serum but from preliminary work the effects of same were considered likely to be negligible.

The person conducting the assays had no knowledge of the source of the serum sample, whether from patient or control. Where it might be possible for him to glean information from the name, attached to the sample, the former was suitably changed.

The results are recorded in Table 12.

All figures are in ug. Acetylcholine per 100 mls. blood plasma. The reported assays were carried out on the blood pressure of the cat under pentobarbitone sodium anaesthesia. All depressor activity was abolished by minimal doses, (2 mgs./kilo), of atropine. Parallel assays on frog rectus gave similar results.

Table 12

Serum Acetylcholine Assays

| Sample | Patient | Control |
|--------|----------|-------------|
| 1. (i) | 1.5 ug%. | * |
| (ii) | 1.7 ug%. | < 1 ug%. |
| (iii) | 1.3 ug%. | < 1 ug%. |
| (iv) | 1.5 ug%. | < 0.5 ug%. |
| 2. (i) | 2.0 ug%. | * |
| (ii) | 2.0 ug%. | < 1 ug%. |
| (iii) | 2.0 ug%. | < 0.5 ug%. |
| (iv) | 1.8 ug%. | ø 2.8 ug%. |
| | | < 0.5 ug%. |
| 3. (i) | 1.5 ug%. | - |
| (ii) | 2.5 ug%. | - |
| (iii) | 3.0 ug%. | øø 2.0 ug%. |
| (iv) | 2.5 ug%. | - |
| 4. (i) | 3.0 ug%. | 1.1 ug%. |

*
i.e. the cat would have responded to ACh at a dilution of 1 ug%. (or 0.5 ug%). These samples had no effect at all.

ø This finding could not be verified on repeating the assay on another cat on the day following that on which the high acetylcholine content was observed. No acetylcholine was detected in the sample in this second assay and it is likely the initial result was due to experimental error.

øø Further samples were rejected due to fault in storage

Chapter 3

Discussion of Findings

The results tabulated above were obtained from four patients and their matched controls. Patients and controls, 1-3, were female, and weekly tests done to estimate if the phases of the menstrual cycle affected the serum acetylcholine content. No evidence of same was found. A serum concentration of 2.8 ug% found in one sample of control 2 was probably due to experimental error, as it could not be verified on subsequent assay. Control 3, for whom the findings for only one sample were available, exhibited an acetylcholine content of 2 ug%. Repeat of the assay on another cat and a parallel study on the frog rectus preparation confirmed this finding. The significance of this was uncertain, but it was subsequently discovered this control suffered from recurrent dyshydrotic pompholyx. The rash of same was moderately active when the blood sample was taken. Three of the four samples from this control were wasted due to an error in storage. A similar loss was incurred in a number of other samples, due to initial ignorance of the necessity to adjust the serum to pH4 before despatch.

While the findings for the control group were somewhat confused by the complications described above, those for the Rosacea patients showed a significant serum concentration of acetylcholine in all cases. Two of the controls gave a persistently negative response, excepting the one sample where the acetylcholine concentration observed was believed due to experimental error. In controls 3 and 4, the serum gave a positive response but this was considerably lower than the sample from a

Rosacea patient with whom it was matched at assay.

These findings are in the predicted direction and tend to support the hypothesis that the blood in Rosacea patients contains a concentration of acetylcholine which may be adequate to produce a persistent dilatation of their vaso-labile facial vessels.

This study was intended as a pilot investigation. Due to the loss of a considerable number of samples, the results are too few for significant conclusions to be drawn. However, as they stand they point in the right direction and indicate the desirability of further investigations along similar lines. They are of further interest in the detection of acetylcholine in significant concentration in the serum of a control with dyshydrotic pompholyx. Thus in effect this test picked out from eight individuals five with active neurodermatoses.

This raises the broader question of the implication of acetylcholine in other neurodermatoses. Hyperhidrosis and dyshydrotic pompholyx would seem likely cases in point. As has been earlier pointed out the basic mechanism of the former condition has been hypothesised as due to an increased nervous discharge to the sweat glands, (Chalmers and Keele, 1949). The association with emotional disturbance may be described as an 'upward discharge' from the emotional centres of the brain to the area of sensorimotor cortex believed to control sweat gland secretion, (Gellhorn, 1953). No definite evidence for the subsequent 'downward discharge' to the eccrine glands has been adduced. Chalmer's conclusions were mainly based on the negative findings obtained in testing the alternative hypothesis, that the sweat glands were abnormally

sensitive to normal amounts of the chemical transmitter activating them.

In the light of the above investigation a further possibility arises. Acetylcholine may be released into the blood in heightened states of emotional excitability, and produce the observed effect by its peripheral action. Against this however is the fact that Chalmers was unable to produce sweating by intravenous injection of Mecholyl (acetyl- β -methylcholine). Flushing of the face was however produced. The emotional disturbance associated with hyperhidrosis and ^ddyshydrosis is similar to that of Rosacea in the high incidence of anxiety and tension. According to Gellhorn, this pattern of emotional disturbance is related to an increase in parasympathetic activity. In so far as dyshydrotic pompholyx is related to increased sweat gland activity, it may also be determined by an increased parasympathetic effect, or the presence of a significant content of acetylcholine in the blood serum.

It is relevant that Goldman, 1941, induced recurrences of dyshydrotic pompholyx by injections of a cholinergic drug.

One might carry the hypothesis even further. Pruritus is a fundamental symptom in most neurodermatoses. Loewenthal, 1949, presented a small number of cases of idiopathic pruritus believed of cholinergic origin. Other authors have called attention to the intense pruritus observed in the sweat retention syndromes. Pruritus appears to underlie many cases of neurodermatitis. Stokes, 1932, and Rogerson, 1947, claimed that vagotonia preponderated in neurodermatitis patients. Rothman and Coon, 1940,

discovered acetylcholine in the cutaneous lesions of neuro-dermatitis. Brunner, 1948, argued the lesions of neurodermatitis were due to a cholinergic reaction in the skin. Cholinergic urticaria is a well established clinical entity, with often an emotional basis.

One may speculate further along such lines but no definite evidence is as yet available to support new aetiological theories. Cormia's, (1951), experiments with Mecholyl as a possible pruritic agent, do not conform with the theory that acetylcholine might be directly or indirectly involved in the pruritic reaction. However, most neurodermatoses are related in their similar patterns of emotional disturbance. If emotional disturbance in one group of patients can be associated with the presence of acetylcholine in the blood, it seems reasonable to search for a similar reaction in related syndromes.

It is of interest that recent work has shown that endogenous adrenaline may potentiate the action of acetylcholine, (Crossland, personal communication). Thus increased adrenaline plus normal acetylcholine would have the same effect as increased acetylcholine. This would make more understandable exacerbations of psychocutaneous disease in the face of acute stress situations where a predominantly adrenergic response might be anticipated.

In the present state of knowledge this hypothetical formulation of the hormonal factors in the neurodermatoses can be carried no further. Psychocutaneous disorders are in the main stress reactions and as such will exhibit some of the complex neuro-endocrinal disturbance now known to occur in such conditions. To discuss them only in terms of the autonomic discharge would be

oversimplification. As Gellhorn points out, both sympathetico-adrenal and vago-insulin systems are activated by emotional disturbance. What appears to be a cholinergic predominance may represent only the augmented effect of increased adrenalin secretion on normal parasympathetic activity. It is therefore of interest that preliminary assays of the blood samples on the isolated rat uterus have revealed significant variations in adrenaline content, sufficient to suggest that further studies would be profitable.

This pilot investigation purports to show the presence of acetylcholine in significant concentration in the blood serum of Rosacea patients. It does not indicate the source of origin of this acetylcholine, whether central rather than peripheral. As yet there is inadequate evidence to confirm that acetylcholine appears in the blood in emotional states in human beings. There is also no direct proof that the vaso-labile facial vessels of Rosacea are sensitive to these small amounts of circulating neurohumor. One cannot therefore state with certainty that the vasodilatation of the face is connected to the serum acetylcholine. However, in favour of this theory is the fact that intravenous acetylcholine produces facial flushing in normal subjects.

One might further query if the gastric disturbance of Rosacea is not secondary to this cholinergic reaction rather than causal of same as has been suggested.

One must conclude that the determination of serum acetylcholine in Rosacea patients is only a first step in the elucidation of a complex problem. It is hoped that the findings of a larger

investigation now under way may shed more light. In this, serum acetylcholine is being determined in (i) Rosacea; (ii) dyshydrosis; (iii) anxiety states; and (iv) non-psychogenic skin disorders. It is hoped to identify acetylcholine in the serum of groups (i), (ii), and (iii). Thereby its presence in Rosacea and possibly dyshydrosis may be confirmed, and the relationship with anxiety reactions determined. As a corollary to this work, weekly samples of blood from patients under psychiatric treatment for psychocutaneous disorder are being assayed for hormonal content. It is intended to correlate these findings with the reaction of the patients to such treatment.

An investigation in this field should not be confined solely to the study of cholinergic activity. It is intended to extend the scope of the assays to include determinations of adrenaline, nor-adrenaline, and histamine serum concentrations.

PART VI.

RORSCHACH INVESTIGATION OF PERSONALITY

| | |
|------------|--------------|
| Chapter 1. | Introduction |
| Chapter 2. | Procedure |
| Chapter 3. | Findings |
| Chapter 4. | Discussion |

Chapter 1

Introduction

The Rorschach method of projection testing is a classical technique in psychiatric practice. By means of the patient's reactions to the ink-blot test cards, some understanding of the basic personality patterns may be obtained. In so far as psychological disturbance can affect these reactions, it may be possible to delineate abnormal personality patterns peculiar to such illness. The test is claimed to reveal the personality in its many facets. It is not intended to show up abnormal patterns of behaviour nor can its protocols provide precise diagnoses in psychological illness. Most workers would agree that the aim of the Rorschach test is to reveal the underlying abnormalities of personality which may lead to the disturbance of the emotional life, thought, or behaviour found in psychiatric illness.

The Rorschach measurement of personality has not been as freely used in the study of the neurodermatoses as in other psychosomatic complaints. In most cases the Rorschach findings have been integrated into the clinical assessments of the individual dermatoses. In few reports have they been considered apart from the clinical picture. Lynch, 1945, noted from Rorschach studies of patients with atopic dermatitis, their tendency to use concrete tangible, rather than abstract, thought. Material realities in the environment rather than a rich phantasy life provided the motivations for their behaviour. Suppressed hostility was a common finding as were trends to high emotional reactivity. The latter were masked by suppression to give a

superficial appearance of emotional stability. Obsessional traits were frequently found. Kepecs, 1951, described the Rorschach findings in a series of cases of atopic dermatitis as delineating two main personality groupings. The much larger group showed an emotionally labile picture tending to hysteria. The smaller group were predominantly rigid and tending to the compulsive. Hostile attitudes were usually conscious and freely expressed in the test situation. Emotional hyperreactivity was again controlled by suppression. Obsessional trends were not marked. Obermayer, 1952, found in neurodermatitis patients a high preponderance of obsessive-compulsive traits. A large number of patients displayed hostility in their Rorschach records. A control group of hospitalised neurotics showed a similar high incidence of obsessional reactions but their hostility score was low. Many of the neurodermatitis patients disclosed in their records a strong concern with tactile sensations and touch. A consistent Rorschach pattern common to all the skin patients was not found. Sternberg, (1951), in discussing Obermayer's findings, disclosed similar results in Rorschach testing in atopic dermatitis. His patients revealed mainly obsessive-compulsive tendencies; hostility; and insecurity. However a high incidence of similar findings was observed in his two control groups of non-psychogenic chronic skin disorders and normals.

The above reports are representative of the Rorschach findings in psychocutaneous disorders. Probably rightly, most workers appear to regard the Rorschach records as complementary to the clinical findings. The data on which the Rorschach findings are

based are not presented. Only two reports known to the author can be classed as pure Rorschach studies in the neurodermatoses, in the sense that they mainly consider the relevant test scores. Plesch, 1951, discussed Rosacea and erythrophobia in the light of their Rorschach protocols. He found a high incidence of neurotic association and evidence of immature ego development and a poorly controlled emotional life. His findings were partly derived from interpretation of the content matter in the tests and therefore are not completely objective or free from sectarian bias.

Levy, 1952, tested the hypothesis that neurodermatitis patients revealed oppositional tendencies, hostility, and constriction of personality in their protocols, as compared with a control group of industrial skin diseases. The relevant findings in the neurodermatitis group were repressed hostility; less constriction of personality; and a tendency to hysterical reactions. She therefore concluded neurodermatitis was a conversion hysteria syndrome and a method of expressing hostility.

From her findings, Levy's conclusions do not appear entirely justified. Her control group of industrial dermatoses is also suspect, in view of the known heavy psychogenic loading of some industrial skin diseases.

In the Rorschach study presented in the following chapter, the approach is similar to that used in the clinical assessments. Attention is directed principally to a comparison of the findings in different psychocutaneous syndromes, rather than to close consideration of specific dermatoses. By this study it is hoped

to assess possible relationships between factors of personality and specific dermatoses. These findings will also be compared with the clinical assessments described in Chapter 2 of the clinical analysis.

The clinical notes by the clinical psychiatrist were then reviewed. The descriptions of individual patients as laid down by Hargreaves and Kelly, and the clinical categories of skin disease used in the clinical analysis were used as guides. The clinical notes were then 'coded' in that the key words were entered in the patient's file. The only information given was the clinical diagnosis of 'neurodermatitis'.

The clinical notes were then passed on to a colleague for clinical examination. They were not examined by the clinical psychiatrist described in part 3 of the clinical analysis. This was to prevent any influencing of the clinical examination by the research findings. The only clinical examination was to ascertain whether there were clinical differences between the diagnostic groups, for the purpose of the study.

For the limited purposes of this thesis a full clinical examination was not carried out. Instead a clinical examination was carried out to determine the clinical differences between the diagnostic groups.

Chapter 2

Procedure

The Rorschach test was applied to 102 cases of psychogenic skin disorder. The cases were chosen from those patients who form the clinical material assessed earlier. The only criteria of selection were their skin diagnoses and their availability for testing.

The tests were administered by the clinical psychologist attached to Whitchurch Hospital. The technique of testing and the basic scoring was as laid down by Klopfer and Kelly, 1942. Certain additional categories of scoring were used as described below. The psychologist worked 'blind' in that she had no foreknowledge of the patient. The only information given was that the patient had 'neurodermatitis'.

The tabulated data was then passed on to a colleague for statistical examination. They were not examined by this author until after the clinical analysis described in part 3 of this work had been completed. This was to prevent any influencing of the clinical assessments by the Rorschach findings. The aim of the statistical analysis was to ascertain whether there were significant differences between the diagnostic groups, for certain selected Rorschach scores.

Scoring. For the limited purposes of this thesis a full analysis of all Rorschach scores was not carried out. Instead a number of principal factors were extracted for statistical comparison. The intellectual aspects of the protocol findings were largely ignored and attention concentrated on the emotional aspects of the personality structure. The meanings attributed to the extracted

factors were as laid down by Klopfer and Kelly, (1942), and Mons, (1947), other than those for whom other references are quoted. These factors and the meanings applied to them are as follows:

- (1) M, (human movement responses):- These are said to represent the inner living; maturity; emotional stability and personality integration. A normal intelligent adult should give 2-3M responses.
- (2) ΣC , (the sum of the colour responses), is obtained from the sum of the colour factors, FC, CF, and C, using the formula, $\frac{FC + 2CF + 3C}{2}$. It represents the emotional reactions of the individual and his reactions to his environment. The greater the proportion of pure colour used the stronger the emotional reaction, and the less controlled and more impulsive it will be. Normal adult records show 2-3 FC responses, a lesser number of CF, and no C.
- (3) M: ΣC :- This ratio, the experience balance, indicates the degree to which the behaviour of the individual is dominated by the inner phantasy life, (M), or reacts to his environment, (ΣC). It is a measure of introversion: extratensiveness or extraversion.
- (4) F%:- The % of form responses in the total record gives a measure of the control of the emotional life by the critical intellectual faculties of the personality. F% in a normal adult record should be less than 50. Above this value represents a progressive degree of constriction.

- (5) Anatomy responses:- These are believed to give a measure of hypochondriasis in other than those whose profession or interests would give them an unusual familiarity with anatomical terms and configurations.
- (6) Hostility score:- This indicates repressed rather than overt hostility. It is derived from the sum of the space responses, and the verbal aggression and 'hostility content' scores.
- (7) Obsessional traits:- These are assessed on the presence of small detail responses, exactness verbalisations, and constriction of the personality. Any evidence of obsessional trends was scored as + in this work.
- (8) Anxiety score:- This is made up of 15 factors all of which according to the accepted literature are indicators of anxiety. Recent attempts to validate these factors against stress situations or by hypnotic induction of anxiety have, with certain exceptions, failed to do so. (Levine, 1943; 1944; and Eichler, 1950). Such studies have so far tended to validate only six of the 15 anxiety factors. For the purposes of this work these validated factors have been loaded in the anxiety score by giving each a value of 2, as against a value of 1 for each unvalidated factor.
- (9) Tension score:- This measurement was evolved by Phillips and Elmadjian, 1947, as an indication of the intensity of the affective drive and the degree of its acceptance or non-acceptance by the patient. A high tension score

suggests a strong affective drive, and a normal ability to tolerate tension. The lower the score, the greater the inability to tolerate tension.

(10) Signs of neurosis:- These are scored according to the criteria of Miale and Harrower-Erickson, 1940. The maximum score is 10. A score of 5 or more indicates neurotic disturbance.

(11) Signs of hysteria:- Scoring is as per Hertz's classical formula, described by Mons. The maximum is 6, and a score of 4 or more is pathological.

(12) Personal Adjustment } Each consists of 10 signs of adjust-
(13) Social Adjustment } ment. None of these scores
individually is indicative of
abnormality, but a preponderance
of responses which deviate from
the normal is suggestive of
maladjustment, (Muensch).

Analysis of data

The data on 95 cases were submitted to analysis. The remaining 7 records were not included as they were obtained from a number of differing skin conditions and were too few to classify in any diagnostic category. The chosen 95 cases were divided into the following diagnostic groupings:- Rosacea (17 cases); urticaria (9); seborrhoeic dermatitis (10); pruritus ani (9); other pruritus (8); atopic eczema (5); dermatitis artefacta (5); dyshydrosis (13); neurodermatitis (19).

The atopic eczema and dermatitis artefacta groups were small for definite conclusions to be drawn. However, as the method

of analysis of variance used was applicable to minimum groups of 5 they were included out of interest. Pruritus vulvae, (4), was combined with local or generalised pruritus, (4), as 'pruritus' in order to include these conditions in the analysis. Pruritus ani was kept a separate group as forming a fairly large independent unit.

Interpretations of individual records had been made at the time of testing. They were not used for the purpose of this work which was confined to the tabulated data. Thus the findings were based on purely objective data with the possible exception of content material used in assessing hostility.

All the extracted factors were subjected to statistical analysis with the exception of obsessional traits, and the experience balance. These did not lend themselves to statistical assessment. The case material in the former was inadequate for a χ^2 test of significance, which requires a minimum theoretically expected value of 5, in any cell. No satisfactory method of subjecting the experience balance to statistical examination could be devised in view of the high incidence of zero scores. A preliminary inspection of the scores for the diagnostic groups showed that one could not confidently assume normal disturbances in the population from which the samples were drawn. The usual analysis of variance which presumes such a distribution was therefore not carried out. Instead, a ranking method was preferred, the technique used being that described by Kruskal and Wallis, 1952. In this method the N observations for one variate in all samples are arrayed in order of magnitude and then

ranked from 1-N. A statistic H is then calculated from the following formula:-

$$H = \frac{12}{N(N+1)} \sum_{i=1}^C \frac{R_i^2}{n_i} - 3(N+1)$$

C = the number of samples; n_i = the number of samples in the ith sample; N = $\sum n_i$, the number of observations in all samples combined; R_i = the sum of the ranks in the ith sample.

Large values of H lead to rejection of the 'null hypothesis'. Subject to certain factors, which apply in this Rorschach group, H is distributed as χ^2 , with C - 1 degrees of freedom. The value of P, the probability that the differences were due to chance, can therefore be obtained from the tables of χ^2 .

A correction for the number of ties in ranking should be applied to the H score. This was not done here as from preliminary work it was considered unlikely to materially alter the significance of the findings.

The range, arithmetic mean, and mean rank of each score, for each diagnostic group are shown in tables 9 and 10. The last two rows contain values of H and P. Table 9 is devoted to the raw data assessed in this work. In table 10, the computed scores for the theoretical concepts, such as anxiety reactions and degree of adjustment, are similarly assessed. A further table of additional values is added. The meanings attributed to these are described in the text.

RORSCHACH FINDINGS

Tables 9, 10 and 11

(Initial letter or letters are used to designate
diagnostic groups, (and controls, (C).)

Table. 9.

BORSCHACH FINDINGS

- Analysis of Raw Data

| (1) = Range | (2) = Mean | (3) = Mean Rank. |
|-------------|------------|------------------|
|-------------|------------|------------------|

| Diagnostic Group (number of cases) | M Score | Sum O Score | P% | Anatomy responses score. |
|---------------------------------------|-----------------------|------------------------|-------------------------|-----------------------------|
| Rosacea (17) | 0 - 2 0.35 31.2 | 0 - 4 1.4 38.7 | 33 - 90 65.7 56.4 | 0 - 6 1.2 46.5 |
| Urticaria (9) | 0 - 4 1.6 57.4 | 0 - 8 3.5 61.1 | 41 - 77 56.2 41.2 | 0 - 4 1.7 54 |
| Seborrheic dermatitis (10) | 0 - 4 1.1 49.9 | 0 - 8 2.0 43.5 | 37 - 83 65.5 56.5 | 0 - 6 1.8 50.5 |
| Pruritus ani (9) | 0 - 5 1.7 62.2 | 0 - 5 2.7 59.9 | 17 - 77 55.9 44.1 | 0 - 4 1.9 58 |
| Pruritus (8) | 0 - 6 1.0 37.7 | 0 - 9 3.9 69.1 | 18 - 70 42.0 25.4 | 1 - 3 1.9 62.9 |
| Atopic Eczema (5) | 0 - 3 1.6 59.5 | 1 - 3.5 1.9 48.0 | 45 - 83 58.0 44.4 | 0 - 2 1.0 46.6 |

Table 9 (contd).

RORSCHACH FINDINGS - Analysis of Raw Data

(1) = Range (2) = Mean (3) = Mean Rank

| Diagnostic Group (number of cases) | M Score | Sum C Score | P% | Anatomy responses score. |
|---------------------------------------|---|----------------------|-------------------------|-----------------------------|
| Dermatitis artefacta (13) | (1) (2) (3) 0 - 6 2.4 62.6 | 0 - 4 1.4 38.0 | 45 - 89 68.6 60.3 | 0 - 2 1.2 49.6 |
| Dyshydrosis (13) | (1) (2) (3) 0 - 4 1.6 59.4 | 0 - 5 2.0 47.9 | 15 - 80 55.3 43.6 | 0 - 4 0.8 39.3 |
| Neurodermatitis (19) | (1) (2) (3) 0 - 6 0.8 40.6 | 0 - 5 1.6 40.6 | 9 - 93 60.9 51.3 | 0 - 8 1.0 38.1 |
| H. | 16.78 | 12.59 | 10.35 | 7.85 |
| P. | < .05 | * | * | * |

* = not significant.

Table 10.

ROESCHACH FINDINGS - Analysis of "concept scores"

| Diagnostic Group (number of cases) | (1) = Range | | | (2) = Mean | | | (3) = Mean Rank | | | Hostility Score | % Patients with obsessional traits. |
|---------------------------------------|--|-----------------------------|-------------------------|-------------------------|-----------------------------|---------------------------|-----------------------|------|--|--------------------|--|
| | Anxiety Score | Tension Score | Signs of Neurosis | Signs of Hysteria | Personal Adjust- ment | Social Adjust- ment | | | | | |
| Rosacea (17) | (1) (2) (3) 3 - 12 6.7 53.9 | -2.5 : +3.5 +1.6 51.3 | 0 - 9 6.2 57.1 | 0 - 3 1.7 39.5 | 2 - 9 5.4 38.3 | 2 - 9 4.3 43.9 | 0 - 4 1.9 36.0 | 58.8 | | | |
| Urticaria (9) | (1) (2) (3) 0 - 8 4.4 35.2 | 0 - 9.5 + 2.7 53.0 | 2 - 7 4.8 36.3 | 0 - 6 3.3 61.4 | 3 - 8 6.2 50.8 | 3 - 10 5.3 59.4 | 0 - 8 4.4 64.6 | 55.5 | | | |
| Seborrheic dermatitis (10) | (1) (2) (3) 0 - 11 5.7 46.5 | -1.5 : +7 + 2.3 56.6 | 3 - 9 6.0 52.7 | 0 - 5 2.0 44.0 | 4 - 8 6.0 45.8 | 1 - 6 4.3 49.7 | 0 - 8 4.2 60.7 | 40 | | | |
| Pruritus ani (9) | (1) (2) (3) 0 - 6 3.3 24.8 | 0 - 6 +3.1 66.7 | 3 - 6 4.8 34.6 | 0 - 6 2.8 55.0 | 5 - 9 7.2 65.3 | 2 - 8 4.9 54.4 | 2 - 11 5.7 71.6 | 67 | | | |
| Pruritus (8) | (1) (2) (3) 3 - 9 6.6 54.7 | 0.5 - 8 + 4.4 70.6 | 2 - 9 6.2 56.4 | 1 - 6 4.0 73.2 | 3 - 10 6.0 44.0 | 1 - 9 3.6 30.4 | 1 - 18 4.8 52.3 | 37.5 | | | |
| Atopic eczema (5) | (1) (2) (3) 1 - 13 6.2 47.7 | 0 - 6 + 2.1 50.4 | 2 - 8 4.8 38.2 | 0 - 4 2 44.9 | 4 - 10 6.8 55.2 | 3 - 9 7.2 54.2 | 0 - 6 2.4 40.9 | 80 | | | |

Table 10 (contd.)

RORSCHACH FINDINGS - Analysis of "concept scores".

| Diagnostic Group (number of cases) | Anxiety Score | Tension Score | Signs of Neurosis | Signs of Hysteria | Personal Adjust- ment | Social Adjust- ment | Hostility Score. | % Patient with obsessional traits |
|---------------------------------------|-----------------------|-------------------------|-------------------------|-------------------------|-----------------------------|---------------------------|----------------------|--|
| Dermatitis artefacta (5) | 1 - 11 6.8 53.6 | -2 : +4 +1.0 40.9 | 2 - 8 5.0 37.8 | 0 - 4 1.0 26.6 | 4 - 8 6.4 53.4 | 3 - 8 5.2 59.0 | 0 - 5 1.6 31.0 | 60 |
| Dyshydrosis (13) | 2 - 11 5.8 46.7 | -3 : +3 -0.5 20.7 | 1 - 9 4.9 39.8 | 0 - 6 2.3 47.4 | 4 - 9 6.5 53.0 | 1 - 9 4.7 49.5 | 0 - 7 2.8 45.5 | 53.8 |
| Neuro- dermatitis (19) | 0 - 13 7.1 57.2 | -2 : +7 +1.2 39.7 | 3 - 10 6.3 55.9 | 0 - 5 2.0 44.3 | 3 - 10 5.8 43.2 | 1 - 7 4.0 44.1 | 0 - 9 2.3 39.2 | 47.4 |
| H. | 11.95 | 25.82 | 10.4 | 14.63 | 7.53 | 7.2 | 19.81 | - |
| P. | * | <.01 | * | <.1 | * | * | <.02 | - |

* = not significant.

Table 11.

RORSCHACH FINDINGS - Additional Values.

(1) = Range (2) = Mean

| Diagnostic Group (number of cases) | FM | m | Ratio M : FM (score) | FC | CF | C | % responses cards 8,9,10 | A% | % patients with F% 65 or more |
|--|--------------|--------------|----------------------------|--------------|--------------|--------------|-----------------------------------|------------------|-------------------------------------|
| Rosacea (1) (2) | 0 - 6 1.3 | 0 - 3 0.4 | 6 : 22 | 0 - 3 0.7 | 0 - 4 1.1 | 0 | 20 - 56 37.6 | 33 - 100 58.4 | 52.9% |
| Urticaria (1) (2) | 0 - 7 3.3 | 0 - 6 1.1 | 14 : 30 | 0 - 4 1.2 | 0 - 6 1.9 | 0 - 2 0.8 | 36 - 55 46.6 | 33 - 56 43.7 | 33 % |
| Seborrheic dermatitis (1) (2) (10) | 0 - 7 1.7 | 0 - 4 0.9 | 11 : 17 | 0 - 1 0.2 | 0 - 8 1.7 | 0 - 1 0.2 | 17 - 52 35.3 | 32 - 75 51.2 | 40 % |
| Pruritus Ani (1) (2) | 0 - 6 1.9 | 0 - 3 0.9 | 15 : 17 | 0 - 2 0.8 | 0 - 3 1.4 | 0 - 1 0.7 | 25 - 65 40.8 | 20 - 59 41.6 | 33 % |
| Pruritus (1) (2) | 0 - 3 1.6 | 0 - 5 1.4 | 7 : 13 | 0 - 4 0.9 | 0 - 4 1.2 | 0 - 3 1.4 | 15 - 53 29.5 | 13 - 70 38.1 | 12.5% |
| Atopic eczema (1) (2) | 0 - 3 0.8 | 0 - 1 0.2 | 8 : 4 | 0 - 3 1.0 | 0 - 2 0.8 | 0 - 2 0.4 | 40 - 48 42.6 | 16 - 58 37.6 | 40 % |
| Dermatitis artefacta (1) (2) (5) | 0 - 4 1.6 | 0 - 1 0.2 | 12 : 8 | 0 - 4 1.2 | 0 - 2 0.8 | 0 | 29 - 37 33.2 | 20 - 77 48.6 | 40 % |
| Dysidrosis (1) (2) (13) | 0 - 5 1.8 | 0 - 6 1.0 | 21 : 24 | 0 - 2 0.5 | 0 - 5 1.2 | 0 - 2 0.2 | 22 - 53 37.5 | 24 - 78 54.2 | 38.5% |
| Neuro- dermatitis (1) (2) (19) | 0 - 7 1.6 | 0 - 2 0.3 | 16 : 31 | 0 - 1 0.3 | 0 - 4 0.9 | 0 - 2 0.2 | 18 - 67 34.4 | 27 - 100 55.4 | 52.6% |

Chapter 3

Findings

The analysis of variance was significant for the M score, hostility score, tension score, and almost significant at the 5% level for the signs of hysteria.

M Score and accessory scores FM and m.

The range of mean ranks for the M score is 31.2, (Rosacea), to 62.6 (dermatitis artefacta). The specific syndromes tend to fall into two groups within this range. Rosacea, pruritus, and neurodermatitis are the lowest in order of mean rank value. Similarly dermatitis artefacta, pruritus ani, atopic eczema, dyshydrosis, and urticaria group themselves at the higher end of the scale. Human movement responses, (M), are said to represent the mature phantasy life of the adult; the capability to absorb and utilise experience; and the inner control of the emotional life. Where deficient the individual lacks the inner promptings and control of the emotions which lead to a secure poised attitude to life. The FM response, (animal movement), is a more immature type of reaction and represents the primitive instinctual urges which pre-dominate in childhood. In adult life they are subordinated to the more mature inner control represented by M. Thus the ratio of M : FM responses gives an index of maturity.

The proportion of M : FM responses in Rosacea is approximately 1 : 4 as compared with around 1 : 2 for each other diagnostic group. This indicates a greater tendency to irrational immature behaviour when emotionally stirred. It implies a markedly immature personality. Rosacea patients appear to lack the rich

inner life of the imagination, adequate to guide and control the more primitive, childish, impulses.

The other low ranks on the M score, pruritus and neurodermatitis, do not show the same marked disturbance of the M : FM ratio as in Rosacea. However, it is noteworthy that 5 patients in the pruritic group showed no M responses at all.

If the M : FM ratio is taken as indicating trends to immature behaviour, those with a richer inner phantasy life in the main escape this fault. Of the highest ranking M scores, pruritus and dyshydrosis both show an M : FM index of 0.9, while in atopic eczema and dermatitis artefacta the respective indices are 2.0 and 1.5.

The inanimate movement responses, (m), are an indication of inner repressed hostile forces. They normally should not exceed M or FM. Where they do so, they indicate considerable internal conflict. Pruritus is the only group where this abnormality is marked, although the trend is also present in Rosacea and seborrhoeic dermatitis.

For maturity, M should equal or be greater than FM, and should equal $FM + m$. On the basis of the M : $FM + m$ ratio, Rosacea would be the least mature, (0.35 : 1.7), and atopic eczema the most mature, (1.6 : 1). Other conditions showing considerable immaturity are urticaria (1.6 : 4.4), seborrhoeic dermatitis, (1.1 : 2.6), and pruritus, (1 : 3). The remaining syndromes tend to reveal minor trends towards immaturity.

The mean score for M in a number of diagnostic groups was much less than the adult norm of 2-3. This indicates a tendency towards lack of imaginative intellectual activity and control.

Colour responses, (FC : CF : C), and % responses in
cards 8, 9 and 10

These represent the emotional side of the personality and the way in which the individual reacts to the environment. They are graded from a pure colour response, (C), via an intermediate stage where appreciation of colour and form are intermingled, (CF), to the predominantly structural perception of FC. Similarly the interpretation ranges from the uncontrolled emotional reactions of pure C to the controlled emotional response of FC. The interpretation of CF is an emotional reaction less unstable and impulsive than C. The FC response is the one most socially acceptable, and so indicates a greater degree of social adaptation. The total responses to the last 3 cards in the test, which are coloured, are accepted as an index of the reaction of the individual to environmental influences.

For a desirable record 2-3 FC responses should be present and they should exceed the sum of $CF + C$. The greater this difference, the more favourable the reaction. In this study, only dermatitis artefacta revealed this trend. The mean number of FC responses was low in all groups indicating a tendency towards the less controlled forms of emotional expression. Coupled with an unbalance of the $FC : CF + C$ ratio, the general tendency appeared to be in the direction of emotional instability. The latter was most marked in pruritus, and to a lesser extent in urticaria and pruritus ani. Surveying individual protocols the $FC : CF + C$ ratio was favourable in not more than 10% of cases, scattered equally through the diagnostic groups. As CF is a more immature form of response than FC, the formula $CF > FC$ is a

further indication of immaturity of personality. Apart from atopic eczema and dermatitis artefacta CF was more frequent than FC in all the groups. This was particularly marked in dyshydrosis, neurodermatitis and seborrhoeic dermatitis.

The responses to the last 3 cards should be greater than 30% of the total for the test. Above 40% indicates a progressive tendency to react to environmental influences; below 30%, the reverse. The groups tended to give a normal reaction to these cards except in urticaria where the response was slightly accentuated.

Inner Control of emotion

For emotional reactions to the environment to be of a mature kind, they must be controlled by the reasoning, thinking, imaginative aspects of the mind. This relationship can be expressed in the 'experience balance' derived from the formula $M : \angle C$. A weighting towards the M side indicates introversion; to the colour side, extratensiveness, or a greater capacity to react to the environment. A favourable ratio shows a slight preponderance on one or other side. A balance, (ambiequality), is believed to reveal obsessional tendencies. The experience balance may also reveal constriction or dilation of the emotional life. Where both M and $\angle C$ are low, less than two each, the ratio indicates constriction. Where M and $\angle C$ total 6 or more, the record is dilated.

It is difficult to compare the experience balance for the diagnostic groups. If the ratio of the means of sum M and sum C is used, extratensive tendencies are shown by all the groups

other than atopic eczema, dermatitis artefacta, and dyshydrosis, where the means are equal or weighted slightly to one or other side. In terms of mean ranks, the picture alters in that the former conditions reveal rather more pronounced introversive trends, and pruritus shows accentuated extratensiveness. The latter finding agrees with the ratio for the arithmetic means, the latter being the most extratensive at 1 : 3.9.

Animal responses, (A%).

These again are an immature form of response and therefore assist in assessing personality maturity. The greater the value of A% above 50, the less mature and the more stereotyped the personality. Rosacea, seborrhoeic dermatitis, dyshydrosis and neurodermatitis fall into the latter category.

Constriction of personality (F% ; M : \leq C ratio)

This, the indication of the intellectual control of the emotions, is represented by the percentage incidence of form responses in the record (F%). The difference between the groups on this variate is not statistically significant. However, the trends which appear are of some interest. The mean ranks show constriction highest in dermatitis artefacta, Rosacea, seborrhoeic dermatitis, and neurodermatitis. This agrees to a large extent with the arithmetic means finding. A value of 50% for F is usually taken as the dividing line between constriction and spontaneity of emotional reaction. The higher the value above 50%, the greater the degree of constriction. This value of 50% is probably too low and Beck, 1950, found the normal value to be 70.17 in a large American sample. For the purpose of this work,

65% was taken as an arbitrary value and all scores above that figure are recorded in Table 11. Rosacea and neurodermatitis on this basis emerge as easily most constricted, and pruritus as least constricted. The M : \leq C ratios were considerably constricted in neurodermatitis, (63%); atopic eczema, (60%); dermatitis artefacta, (60%); and Rosacea, (59%). They revealed dilatation in 40% of the protocols for atopic eczema, and for dermatitis artefacta. No Rosacea record was dilated.

The anatomy responses as an index of hypochondriasis revealed no significant differences. Similarly, the percentage of patients with obsessional traits was fairly widely scattered. The high incidence of obsessional traits in atopic eczema was possibly due to the small size of the sample. However, 4 of the 5 patients showed considerable ambiequality of the experience balance, also indicating obsessional trends.

Turning from raw data to the 'concept scores', the analysis revealed that the groups differed significantly only in the tension and hostility scores, although the difference in 'signs of hysteria' was almost significant at the 25% level. These 'concept scores' may be so named, because they are derived from theoretical formulations as to the significance of certain patterns of reaction to the Rorschach cards. They are for the most part unvalidated, although the indicators which form the hostility and anxiety scores, and the signs of neurosis and hysteria, are generally accepted by most Rorschach workers. The hysterical personality tends to give a high hysteria score, but this latter is found in only 50% of hysterics, and is frequently absent where conversion hysteria is clinically unequivocal (Mons). The signs of neurosis

are even less reliable and particularly so where responses are numerous. A score of 7 is a strongly positive result, but 5-6 is often found in undoubted neurotics. The tension score is completely unvalidated, and is presented here only out of interest. The higher the score, the more normal the personality for this concept.

Surveying the mean rank scores for the several groups, the anxiety score can be seen to be fairly equally distributed but is considerably lowered in pruritus ani. The difference between the groups was, however, not statically significant. The pruritus ani and pruritus have the highest mean rank tension scores, indicative of a fairly normal direction and utilisation of affective drive and a capacity to tolerate tension. The signs of neurosis were most marked in Rosacea, seborrhoeic dermatitis, pruritus, and neurodermatitis. The mean score in each of these groups was approximately 6, indicating a moderate degree of neurotic disturbance. Expressed in terms of the number showing a score of 5 or more on the neurotic scale, the same dermatoses appeared most neurotic, the incidence being neurodermatitis, 84%; Rosacea, 82%; pruritus, 75%; and seborrhoeic dermatitis, 60%. If the significant score was raised to 7 or over, the incidence of neuroticism was 50%-53% for these four conditions. The other dermatoses ranged from 20%-40%, except for pruritus ani which had no score greater than 6.

The incidence of a significant hysteria score, (4 or greater), was 75% in pruritus; 55% in urticaria; 33% in pruritus ani; and under 30% in every other dermatosis. The mean rank score was in accord with these findings. The personal and social adjustment

scores were low in Rosacea, pruritus, neurodermatitis, and seborrhoeic dermatitis. If the incidence was determined for scores of 4 or less in either scale, the findings were Rosacea, (29% : 65%); urticaria, (22% : 55%); seborrhoeic dermatitis, (10% : 60%); pruritus ani, (0% : 44%); pruritus, (25% : 75%); atopic eczema, (40% : 60%); dermatitis artefacta, (20% : 40%); dyshydrosis, (15% : 62%); and neurodermatitis, (26% : 53%).

The initial percentage in each case represents the incidence of poor personal adjustment. It is interesting to note the much greater degree of social maladjustment in every group.

The differences in the neurosis and adjustment scores were not statistically significant.

Hostility score

This was significant in the analysis of variance at less than the 2% level. Those with marked hostile trends were urticaria, seborrhoeic dermatitis, pruritus, and particularly pruritus ani. It is interesting that these groups also showed a considerably higher incidence of 'm' responses than all the others except dyshydrosis. This finding is in keeping with the incidence of hostility in these conditions.

Chapter 4

Discussion

The material which has been analysed in the previous chapter is that mainly concerned with the emotions, and their ties with the inner life and the outer environment. The intellectual aspects of the personality have been largely ignored. So also have other less important aspects of the personality which also help to shape the total configuration, but which cannot be considered within the scope of this work. The incidence of certain hypothetical formulations have been assessed. Unvalidated as these tests are, significant findings must be given a measure of consideration as the majority of the tests are established by long usage. The content matter in the protocols has not been utilised other than where part of the above 'concept' tests. The 'content' is probably of greater importance in assessing the conscious changes associated with emotional disturbance. The material which has been analysed is mainly that concerned with the deeper strata of the personality. It is constant other than in its development with the passing years.

The findings in individual syndromes are now briefly considered, and their association with clinical assessments.

Rosacea

The Rorschach protocols in this group were consistently abnormal. The predominant personality structure was markedly immature and constricted, (Low M; $FM > M$; $CF > FC$; $A\%$ over 50; $F\%$ very high; $M : \leq C$ constricted). Their affective reactions appeared of low intensity, but not markedly unstable.

($\leq C$ low; $CF > FC$; no pure C). They did not appear greatly affected by their environment. Hostile impulses did not figure largely in their personality structure. They displayed a high incidence of neurotic features and a pronounced degree of personal and social maladjustment.

Urticaria

The personality structure in this group is nearer the normal. Their average M score is a little low, and immaturity of personality is shown by the M : FM ratio being approximately 1 : 2. This is not nearly so pronounced as in Rosacea. They also show a greater degree of emotional reaction to the environment, of a somewhat unstable type ($CF > FC$; mean C = 0.8). Constriction of the personality is not marked and the experience balance tends to a more dilated, extratensive type. Hostile feelings are prominent. Neurotic trends are present but not marked; personal adjustment is fair; social adjustment less good. Hysterical trends are present.

Seborrhoeic dermatitis

The personality is very similar to that of Rosacea in its immaturity and constriction. The affective reaction to the environment is of a low order, but of a more unbridled impulsive form, (CF much greater than FC ; some pure C responses). Hostility is a prominent feature of the personality. The experience balance shows less constriction than in Rosacea and a tendency to extratensiveness. Associated neurosis is common. Social adaptation is poor in comparison to a reasonable degree of personal adjustment.

Pruritus ani

The tendency to immaturity is considerably less marked in this group, although the more immature impulsive forms of emotional reaction still predominate. Of interest is the high incidence of obsessional trends, also indicated by the mean experience balance approaching ambi-equality. Constriction of the emotional life is not present; the tension score is near normality suggesting a more normal affective drive and the ability to tolerate tension. Neurotic features are not greatly in evidence; personal adjustment is good; social adjustment fair. Hostility is prominent. No marked tendency to hypochondriasis is noted.

Pruritus

The records in this group are consistently abnormal in the direction of immaturity and an undisciplined emotional life, not strongly influenced by the environment. Although the M : FM ratio (7 : 13) is no more abnormal than in most of the other groups, the total M score was obtained from 3 patients. Thus in 5 records, the responses indicative of maturity were completely lacking. The relation of FC and CF is also not grossly abnormal but the tendency to marked emotional instability is shown by the abnormal number of pure C responses. Their records are dilated, with F% comparatively low and the experience balance is considerably extratensive. Their tension scores are high and they show marked tendencies to neurotic disturbance, particularly of a hysterical type. Their personal adjustments are fair; social adjustments poor.

N.B. The records for pruritus vulvae appear in no way to differ

from the others in the pruritis group.

Atopic Eczema

The findings here as in the following group, are biased by the small size of the sample. Further this group is much younger in years, (average 22.2 years), than any other group.

The protocols for these patients are among the most normal of all. Thus we find $M > FM$, indicating trends towards maturity, supported by $FC > CF$, and a small number of C responses. The emotional life appears fairly normal, and adequately stimulated by the environment. Obsessional trends are considerable and the experience balance is an ambiequal, slightly constricted one. The hostility score is low; personal and social adjustments only fair. Neurotic trends are not marked.

Dermatitis Artefacta

Again the small size of the sample must be stressed. The records are very similar to those of atopic eczema except for a greater tendency to constriction and an improvement in the social and personal adjustment level.

Dyshydrosis

The records are not dissimilar to those of atopic dermatitis and dermatitis artefacta. The maturity of personality appears less and the emotional responses of a more undisciplined unstable type. However, personal adjustment appears good; social adjustment rather poor. The hostility score is moderate.

The principal abnormality in this group is the very low tension score. This may be taken to represent an abnormal reaction to tension, in an inability to tolerate same.

Neurodermatitis

The pattern again returns to the abnormal with the M score low and the M : FM ratio indicating immature trends of reaction. Constriction is considerable and the total ^affective response poor, with a tendency to the more impulsive unstable forms of emotional reaction. The records are on the whole very similar to those of Rosacea. The neurotic associations are marked; hostility score is low; personal adjustment fair; and social adjustment considerably better than in Rosacea.

The personality groupings depicted above vary widely, but tend to fall into 2 categories. The markedly abnormal are Rosacea, seborrhoeic dermatitis, and neurodermatitis, with pruritus equally so in another direction. The other neurodermatoses fall into a more normal personality grouping with atopic dermatitis and dermatitis artefacta predominately so.

The Rosacea records are most consistently abnormal in the direction of an immature reaction to life with rather infantile but strongly inhibited, affective response. All adjustments appear poor and neurotic trends marked. This is in close agreement with the clinical findings of a socially maladjusted, emotionally inhibited, group. These Rorschach findings are also supported by Flesch's observations on the poorly developed or faulty ego structure in Rosacea and erythrophobia, and the controlled impulse life. The close association with neurosis is shown in the incidence of 82% with a 'neurosis score' of 5 or more. Flesch quoted a similar incidence of 78% in his experimental group, as compared with 20% in controls. He pointed out this proportion

was almost identical with that found by Harrower-Erickson for a group of established neurotics compared with a normal control series.

The Rosacea personality pattern is not specific and is closely related to that found in seborrhoeic dermatitis or to a lesser extent, in neurodermatitis. It differs somewhat in the greater degree of immaturity and a more marked tendency to general maladjustment. The Rorschach abnormalities in seborrhoeic dermatitis agree fairly closely with the clinical findings of severe personality maladjustment in which hostility appears to play a prominent part. Neurodermatitis, clinically, is a widely varied group with no specific personality or behaviour patterns.

In all 3 groups the hysteria score was low. This tends to invalidate the theory that such skin reactions are conversion phenomena. The hostility score was raised only in seborrhoeic dermatitis. This may be advanced as possible evidence against the concept of repressed hostility being acted out in neurodermatitis.

The pruritus group revealed a more hysterical type of reaction with an immature, undisciplined, emotional response in the face of a poor social adjustment. The picture would tend to fit the clinical evaluation of pruritus vulvae, rather more than other forms of pruritus. The Rorschach protocols however tend to show little difference in their clinical conditions. The hostility score is somewhat high. The possibility of the pruritic reaction as a conversion mechanism for the expression of such hostility is a possible deduction from the Rorschach findings.

The great difference between the records in pruritus, and those

for pruritus ani are most interesting. Clinically these groups also tend to be distinct, the background in pruritus ani being generally a more mature, adult one. The Rorschach records support the clinical view that pruritus ani is not a hysterical phenomenon but one often associated with obsessional trends. The hostility noted clinically is evident in the protocols. However, there is no other evidence to support the theory that pruritus ani is a conversion reaction to repressed hostility.

Hostility is also very evident in the records in urticaria, again in keeping with clinical findings. So also is the tendency of this group to some degree of emotional instability and their extratensive attitude to their environment.

The lack of hostile responses in atopic eczema patients is most interesting and unexpected in view of their observed tendency to develop hostile child-parent relationships. The possible explanation is that in the latter case hostility is fully conscious and often freely expressed and so does not tend to become integrated into the individual personality structure. The relatively normal Rorschach findings in this group suggest they have considerably adapted to their disability. They also indicate a possible reason for the development of the hostile family relationships. Unlike the Rosacea patient who has also been considerably overprotected as a child, the atopic with a constitutional drive to better adjustment resents the smothering attitudes of the parents. The Rosacea patient with a poor affective drive and general personality endowment will accept, possibly welcome, the overprotection and remain submissive and dependent. The atopic patient cannot tolerate the same brake

on his drives and thereby comes into open conflict.

The findings in dermatitis artefacta were also most surprising. In view of the reputed association with conversion hysteria or the hysterical personality, one would have anticipated the Rorschach to give some indication of this. Their records are however the most normal of the group. This leads one to the alternative theory for dermatitis artefacta that it is a consciously purposive act for material gain. It may be the size of the group has greatly prejudiced the findings, but clinically, two patients could be classified as falling into this category. It will be interesting to review the findings when this group is enlarged in the continuance of this investigation.

The dyshydrotic group while not a normal one is distinguished mainly by the low tension score. The interpretation of this as an inability to tolerate tension with the skin reaction as the outlet for same, is not one completely satisfactory to this author. The tension score does appear to give some measure of the intensity of the affective drive and its inhibition. A reaction to the frustration of such affective drive would tend to accord more with the clinical picture. Clinically, tension is probably greatest in dyshydrosis. This accords with the ^d dyshydrotic group occupying the lowest, and therefore most abnormal, position, in the tension score. It is intended to analyse the components of the tension score to determine if a more accurate localisation of the source of this abnormality can be found.

The surprisingly low anxiety score in each group is not in accord with the clinical findings of anxiety as the predominant emotion in each group. However, the latter emotion is conscious and therefore probably not likely to appear to any extent in the Rorschach assessment which is claimed to probe the deeper strata of mind. The approximate equality of the anxiety score through the groups is in accordance with clinical impressions of generalised anxiety.

One may sum up this section by saying the Rorschach findings appear of considerable value in assessing the personality background to the neurodermatoses. They point to significant differences between the groups which are reflected in the clinical assessments of same. A number of surprising findings have emerged which need confirmation in the study of larger groups of patients. Certain psychopathological mechanisms, such as the child-parent relationship in atopic eczema, are better understood in the light of the Rorschach findings. Specific personality patterns restricted to individual dermatoses were not found, excepting possibly in pruritus. There appears considerable scope for a much wider study by this technique in the field of the neurodermatoses.

The above report is an interim one, confined mainly to the emotional aspects of the Rorschach test. It is intended to amplify this for publication by a statistical analysis of all relevant data in an augmented series of cases.

PART VII

SUMMARY AND CONCLUSIONS

Summary and Conclusions

In the investigation described in the foregoing pages, 202 cases of neurodermatitis were clinically evaluated, and compared for relevant factors in their family and personal histories, and for stress and emotional factors related to their skin disorders. Their responses to psychiatric treatment were assessed. The personality structure of 95 cases was investigated by the Rorschach projection test. A hypothesis was formulated to explain the vascular changes in rosacea, and tested by an investigation of the serum acetylcholine content.

The findings of the clinical analysis revealed many points of interest. The family backgrounds revealed few factors of relevant importance, other than the faulty attitudes of the parents to the child. Deprivation and rejection appeared as relatively unimportant mechanisms in this group, other than possibly related to the hostile trends encountered in pruritus ani. Overprotection was the principal faulty parental attitude. Its importance lay in preventing the personality maturation of the child, and in reinforcing possibly constitutional faulty trends of personality, as in the overdependency of rosacea patients. A further consequence of this attitude was the production of child-parent conflicts, as in the hostile reactions in atopic eczema. The development of faulty parental attitudes appeared dependent on a specific quality in their relationship with the child rather than on general factors such as neuroticism in the parents.

Considerable differences were noted in the early developments of the group, and the findings suggested a constitutional basis to certain personality groupings. The trends to maladjustment apparent in the life histories of the rosacea, seborrhoeic dermatitis, pruritus vulvae, and pruritus patients as children were continued into their adult lives. It was illustrated in their poor sexual, social, and marital adjustments, and in neurotic trends of reaction. Thus the neurodermatosis patients tended to array themselves along a scale of personality maladjustment with rosacea, pruritus vulvae, and seborrhoeic dermatitis as the most abnormal; and urticaria, dyshydrosis and pruritus ani as the most normal. The personality in rosacea showed a consistent pattern of social inadequacy and emotional constraint. This was assessed with a further consistent abnormality, the labile blush reaction, to evolve the theory that the latter was the factor which conditioned the personality pattern found in rosacea. Sexual maladjustment was most commonly found in pruritus vulvae and the high incidence of hysterical features present in this group was believed related to this fact. Seborrhoeic dermatitis patients revealed less consistency in their personality patterns, but maladjustments were often gross. Hostile trends in pruritus ani, and anxiety, tension, and drive, in dyshydrosis, were other notable personality features.

The stress associations related to the onset and exacerbations of the skin condition were of variegated nature. Stress derived from the skin disorder itself was an important factor,

as also the interaction of same with the personality maladjustment. Particular life stresses appeared to preponderate in certain diagnostic syndromes. These included occupational stresses in dyshydrosis; hostility or resentment situations in pruritus ani; and sexual difficulties in pruritus vulvae.

Particular emotions did not seem specifically related to any one diagnostic syndrome, other than possibly hostility to pruritus ani. The itch and scratch dermatoses, other than pruritus ani, showed no greater incidence of hostile relationships and attitudes than the other dermatoses or a neurotic control group. Other emotional reactions were widely diffused through the groups with anxiety predominating in every syndrome. Phobic anxiety related to health was mainly associated with the pruritic disorders.

The form of the skin lesion could be a guide to underlying personality maladjustments, as in rosacea, or possibly to the nature of the underlying psychopathological disturbance. The localisation of the lesion, mainly in pruritic and scratching dermatoses, could indicate the important foci of emotional disturbance. An interpretation of these phenomena along symbolic lines might be valid in some cases, but should be made with caution in view of the many factors other than emotional which determined the form, localisation, onset or exacerbations of a psychogenic skin disorder.

The findings obtained from the Rorschach test confirmed the abnormal personality patterns observed clinically in rosacea,

seborrhoeic dermatitis, and pruritus vulvae. The findings for pruritus, other than ano-genital, were closely similar to those for pruritus vulvae. Both were quite distinct from the personality pattern in pruritus ani, which tended more towards a normal configuration. The Rorschach findings also confirmed that a particular pattern of personality was not restricted to any one dermatosis. Thus the personality in rosacea was closely similar to that in seborrhoeic dermatitis and some cases of neurodermatitis, in its pattern of social inadequacy and immaturity, and emotional constraint. The hysterical features noted clinically in pruritus vulvae were well brought out in the Rorschach protocols. Hostility was most prominently revealed in pruritus ani and urticaria, and the association of the former syndrome with obsessional trends rather than those of hysteria as in other forms of pruritus, was apparent from the findings. The relative normality of the Rorschach findings in atopic eczema and their lack of hostile responses were in accord with clinical impressions of such personalities and the restriction of their hostile trends to parental relationships.

The findings for the serum assays of acetylcholine tended to support the theory that the persistent flush in Rosacea was associated with a significant concentration of acetylcholine in the blood stream. As the investigation was essentially a pilot one, based on a restricted number of cases, no more significant conclusions could be drawn. The possible implications of this finding to other neurodermatoses, has been discussed.

Faced with the accumulated data obtained from these investigations, one might well repeat the basic aim of this work as enunciated in the introduction," to what extent can psychiatry help these patients, and what is the best way to achieve same?".

If one reconsiders the findings obtained in this study, it may seem these questions are adequately answered. By means of psychotherapy, a minimum of 47% of all cases referred to the psychiatrist by the dermatologist were shown to have been significantly improved. The essential treatment of the neurodermatoses should be psychotherapeutic, aided if necessary by ancillary methods of physical treatment. The value of the form and localisation of the skin lesion in guiding one to the underlying personality maladjustments and conflicts has been described. However, essentially the patient must be treated as an individual in his own setting of reaction.

Elaborate or protracted psychotherapeutic measures are not required. By means of brief, flexible, psychotherapy, the above results of treatment can be obtained. Even better results may be got in some cases by inpatient treatment, particularly with a modified course of insulin.

The prognostic indicators have been described and the therapeutic outlook in individual syndromes evaluated. Thus it might fairly be claimed that a rationale for economic therapy has been established.

Psychotherapy in every case should be aimed at the main focus of disturbance. Thus personality maladjustments are most

important in rosacea; environmental stress in urticaria and dyshydrosis; and neurotic disturbance in the pruritic disorders. Atopic eczema patients are best treated by abreactions and improvement in general adjustment. Neurodermatitis patients must be assessed individually with the localisation of the lesion as a possible guide to the source of disturbance.

In all cases, the patient's attitude to the skin disorder must be improved and individual psychopathological factors dealt with.

Earlier in this work, the broad aims of the investigation were formulated. The basic problem was considered to be the assessment of the neurodermatoses as a true psychosomatic entity. The criteria then laid down, to define a psychosomatic entity, appear to have been adequately fulfilled by the data obtained from this investigation. The onset and major exacerbations of the skin disorders were preceded by significant emotional stress in the majority of cases, and their symptoms could be relieved by psychiatric measures. If, as the more sceptical might claim, the associated emotional disturbance was secondary to the skin lesion, there would seem no reason why the latter should disappear or be materially improved by measures aimed at alleviating such emotional disturbance. If the sceptics were to rephrase their case, that the emotional disturbance and skin lesion interact to potentiate the latter, one would be forced to concede this view in a considerable number of cases. There is no doubt that one of the potent stress factors in the neurodermatoses is the skin reaction itself. Hence the considerable importance in treatment

of attempting to alter the patient's attitude to same. This interaction between skin and psyche is implicit in the formulation of the neurodermatoses as a psychosomatic illness. Thus we psychiatrists must also appreciate that a number of factors may produce exacerbations of the skin disorder, other than the purely psychological.

Assuming that one can accept the psychosomatic concept of the neurodermatoses, certain other problems relevant to same emerge for consideration. One might ask why the skin should be chosen for this interaction of psyche and soma, rather than any other bodily organ. The answer to such question would depend on one's viewpoint, whether one considered the skin disorder as an adaptive reaction necessary to adjust the individual to his environment, or as a 'visceral neurosis' derived from the physiological associations of a disturbed emotional state. In the author's opinion, from the viewpoint of satisfying this query, the neurodermatoses cannot be regarded as a complete unity. Those disorders which are characterised by 'itch and scratch' may well be adaptive processes, as in the pruritus vulvae patient who thereby achieves a solution of her sexual difficulties. Other, more spontaneous skin reactions, such as rosacea and dyshydrosis appear to be dependent on the physiological associations of disturbed emotional states. In the adaptive lesions the skin may be 'chosen' for a variety of reasons, ranging from its simple accessibility, to highly elaborate psychodynamic formulations. It must be pointed out that more recent knowledge has tended to somewhat alter our

orientation to this 'choice' hypothesis. Thus recent work on the pruritic threshold and its reactions to heat or emotional disturbance, and on the sweat retention phenomena, have tended to show that what appeared as 'choice' might actually be dependent on these obscure physiological mechanisms. It is not intended to denigrate the role of unconscious conflicts in the 'adaptive neurodermatoses', by pressing the case of an underlying physiological dysfunction. Rather these mechanisms once again point out, the importance of considering psychosomatic ailments in terms of both mind and body.

In the 'visceral neuroses', one cannot yet explain why the skin is affected rather than another bodily organ. These conditions are essentially stress reactions, and as such indicate a complexity of underlying neurophysiological processes. However, whatever be the nature of the latter, the final component involves an autonomic discharge, either via the nervous connections of the affected organ or by the circulation of the appropriate chemical transmitter in the blood, (Gellhorn, 1953). In this respect the recent work of Lacey, and co-workers, (1952; 1953), may throw some light on the problem of organ selection. They demonstrated that there was individual pattern of organ response to stress, constant for different stress situations. This pattern involved a differential emphasis on certain organs, entirely specific to the individual. Thus the old concept of 'skin reactors' might well be borne out as the explanation for this organ selection in the neurodermatoses. The other ancient concepts of 'vagotonia' and 'sympatheticotonia', have also largely

been superseded, in the recent light on the complex interactions between the two elements of the autonomic nervous system. Again Lacey's work purported to show that organ innervation tended to display an autonomic bias in one or other direction. According to the nature and extent of this bias and the pattern of autonomic discharge in stress situations, the organ was affected to a greater or lesser degree. In this way it can be understood why one organ figures principally in a psychosomatic reaction, and how presumably if the pattern of autonomic discharge alters, other organs may also, or alternatively, be affected. These workers also claimed that their work contradicted the theory that specific patterns of somatic reaction were related to particular emotions. It seems to this author that greater knowledge of this specificity of emotional reaction hypothesis is strongly desired, to prove or disprove certain psychosomatic hypotheses. Thus if blushing were proven to be invariably, or even predominantly, associated with sexual guilt, certain psychodynamic hypotheses on rosacea would be strongly supported.

A concept related to the 'adaptive reactions' is that they may function as an alternative to a neurosis in the adaptations of the individual to the environment. This is not supported by the findings in this work of neurodermatoses occurring in the course of a neurosis, in 20%-50% of cases.

A further problem of fundamental importance is the factors which determine the form and localisation of the skin disorder. This again may be explained in terms of the foregoing consideration of visceral neuroses and adaptive reactions. The former appears

determined principally by physiological considerations, the latter by psychological or 'psycho-physiological' factors. A further possible factor, the dermatological one, is largely bound up with the factor of skin physiology.

This problem is closely linked to the relationship between ~~The Neurodermatoses~~ and specific forms of emotional disturbance, conflict situations, or personality maladjustments. The findings of this thesis, in the main, do not support such relationship, other than in that individuals whose personality maladjustments are associated with certain physiological or psychological reactions will preponderate in the dermatoses derived from such reactions.

CONCLUSIONS

1. The neurodermatoses investigated in this work cannot be regarded as a unitary body, in other than that they display in common a reaction to emotional or situational stress of greater or lesser degree.
2. They are true psychosomatic reactions in that precipitant stresses are clearly related to their onset or exacerbations, and that they can be relieved by the methods of psychiatry.
3. The reason for the development of a skin disorder rather than involvement of another organ is uncertain, but may be related to complex patterns of autonomic innervation and involved neurophysiological interactions. However, psychodynamic theories relevant to this point have not been disproved.

4. The neurodermatoses are readily classified as 'visceral neuroses' where the reaction is dependent upon certain physiological disturbances, and as 'adaptive neurodermatoses' where the skin disorder may depend upon underlying psychological conflicts.
5. The form and localisation of the lesion is dependent principally on physiological factors in the 'visceral neuroses', but may be associated with complex physiological, psychopathological, local physical factors, or their interactions, in the 'adaptive' group.
6. In so far as certain personality types display the physiological or psychological reactions which underlie certain neurodermatoses, they may be preponderant in these conditions.
7. There is no specific personality configuration restricted to a particular dermatosis.
8. The findings of this investigation do not confirm a relationship between a specific form of emotional reaction and a particular neurodermatosis, other than possibly in pruritus ani.
9. The early development of the patient has no specific relationship to the neurodermatoses, other than in favouring the personality maladjustment which render the patient susceptible to stress.
10. The form and localisation of the neurodermatosis can be a guide to the underlying psychological conflicts, personality maladjustments, or sources of stress, but symbolic interpretations must be used with caution.

11. These 'sign-posts' can be utilised for the purpose of rapid clinical assessment and should be used to guide psychotherapy, but the individual reactions of the patient must always be considered.
12. By brief, flexible, psychotherapy aimed at the foci of maladjustment, conflict, or stress, and aided where required by ancillary methods of physical treatment, a substantial proportion of neurodermatoses may be relieved of their skin disorders. The tendency to subsequent relapse is low.

In conclusion, it is hoped this work may be of some value in helping to illuminate a darkened corner of this field of medicine. Its conclusions are tentative but it is hoped will act as a guide for other, more representative investigations. It is the belief of the author that such investigations will only attain their maximum value if conducted as a combined approach in which dermatologist, psychiatrist and physiologist cooperate in a drive towards the same goal. This goal may be formulated as a true psychosomatic understanding of the way in which psychological disturbance may be associated with, or expressed in, a dermatological disorder.

APPENDIX OF ILLUSTRATIVE CASES

ROSACEA.

Case No. 43. Mrs. D. D. Female; Married; Aged 36.

Rosacea present for three years. Onset followed debilitating minor illness. Condition persistent with exacerbations since.

Patient youngest of six; she is illegitimate. Family background happy. Patient overprotected and made much of as youngest child.

Financial difficulty after the death of father. Latter died when patient aged 14 years. Patient always timid and socially diffident; poor mixer and chronic blusher. Displayed minor neurotic traits in childhood. School and work adjustments reasonably normal but somewhat marred by difficulty in social relationships. Married at 19 years the only boy she had been very friendly with, and who was ten years older than herself. A son born three years after marriage; following this event marital relations ceased at the husband's request. Apparently jealous of the child and desired no other children. Since then marital situation most unhappy with patient and husband drifting steadily apart. Latter a schizoid, rigid, religious, bigoted individual with no friends. Hides himself away from whoever visits the home. Patient absorbed in her child and works as a manageress of a dry

cleaning shop. For five years she has continued an extra-marital relationship with director of the firm for whom she works. Apparently purely sexual association despite patient's attempts to rationalise same.

Patient extremely resentful and unhappy of marital situation and guilty that she is to blame for failure of marriage. Denies guilt as to extra marital relationship, but in constant fear of discovery. She herself is illegitimate and has greatly feared possibility of an illegitimate pregnancy. Rosacea began shortly after an incident in which made clear to her that guilty liaison known to fellow workers. Subsequent continued emotional perturbation before onset of rosacea. Latter preceded by short pyrexial illness, following which patient felt debilitated. Has continued since with exacerbations related to further episodes of emotional stress of similar nature. More depressed and unhappy for some years since the death of mother on whom she greatly depended. Embarrassed by comments of customers on skin condition. Feelings of social inferiority and tendency to easily flush with embarrassment aggravated since

onset of skin disorder.

Treatment: Patient was treated by six psychotherapeutic interviews. Psychotherapy was aimed at principal focal conflicts, i.e. guilty extra marital relationship; difficult marital situation; guilt as to illegitimacy; and also to improve her poor social adjustment. Patient much improved by psychotherapy. Depression and tension relieved and skin condition reduced to approximately 25% of former area. Some six months later patient made a suicidal attempt following termination of extra marital relationship. Rosacea returned as severely as ever following latter event. Treated as an inpatient with modified insulin and further psychotherapy, with relief of psychiatric symptoms and marked degree of improvement in skin condition.

Case No. 74. P.S.J. Male; Married; Aged 48.

Rosacea present since 1937, following severe accident at work. Continuous with exacerbations since.

History: Nil in family history. Background happy working-class home. Overprotected as child due to rheumatic fever and other illnesses in early years.

Childhood adjustment poor with marked social inadequacy and neurotic traits prominent; chronic blusher. Married 28 years with three children. Stable work record as coalminer.

Patient severely injured in pit accident in 1937. Accident highly traumatic. Completely buried in roof fall for some minutes. Aware of gradual suffocation before losing consciousness and rescue by workmates. Severe physical injury including fractured pelvis. Long period off work. During same, evidence of anxiety depressive reaction related to economic difficulties; inability to continue usual social activities because of physical aftermath of injury; and fear of returning to underground work. Many terrifying dreams of accident. Subsequently peremptorily boarded as fit for work. Refused to work underground and has continued on light surface work since.

Rosacea began two years after pit accident and at height of psychogenic disturbance related to same. Further exacerbations related to episodes of emotional stress, thermal changes, or embarrassment. Patient

interested in local politics and member of several committees. Extremely embarrassed if required to speak or play prominent role on such occasions, and would blush severely. Apprehensive for days before such event and Rosacea would tend to become exacerbated. No specific psychopathological features observed. Long history of social inadequacy dating from childhood. Same aggravated by physical inadequacies derived from pit injuries. Present condition, feels grossly inadequate and inferior on social occasions and is very tense and anxious. Markedly lacking in emotional spontaneity. Very embarrassed by persistence of Rosacea and the attention it attracts. No evidence of sexual disturbance though inhibited in discussing same.

Treatment: Patient treated with five psychotherapeutic interviews. Main stress considered non-specific and related to poor social adjustment and reaction to skin condition. Psychotherapy aimed at improving these. Following same, rash completely cleared other than around nose area. Patient less tense, anxious and better able to cope with social difficulties.

Follow Up (1 year): Sustained improvement in skin

disorder, except for minor, infrequent, exacerbations.

No major exacerbations since discharge. General improvement in adjustment continued. Tension and anxiety now minimal.

URTICARIA.

Case No. 194. D.W. Male; Unmarried; Aged 26.

History of Urticaria eruption for eight years.

History: Background fairly normal with no family history of nervous disturbance. Patient only boy in family of girls, and overprotected. No early neurotic traits; school record normal; childhood adjustment faulty with tendency to social withdrawal. Work record somewhat unsettled, with several changes of occupation. Adult adjustment fair, but emotionally inhibited and social inadequacy present. Gradual onset of anxiety symptoms mainly related to difficulties in employment and personal life, and subsequently to the urticaria.

Skin rash appeared during course of employment as locomotive fireman which he disliked intensely. Noticed slight prickly feelings on leg when in cab of engine, and subsequently developed urticarial patches which later spread to other parts of body. Usually persistent to minor degree on face with exacerbations of varying severity. Attacks precipitated by heat, exertion, emotion or fatigue. Patient finds social difficulties increased since rash as he worries others may consider same contagious.

Rash occurs in any situation where embarrassed or selfconscious. Blushes easily and if walks into public place becomes conscious of heated face and pricking in skin which precedes onset of rash. If at ease and not paying attention to face, rash soon disappears. No specific psychopathology elicited. Patient is an immature individual with frustrated ambitions and aspirations beyond his intellectual and psychological capacities. Exacerbations of rash obtained by discussing emotionally toned situations.

Treatment: Modified Insulin; Abreactions with Ether and Methedrine; psychotherapy aimed at improving social and occupational adjustment. Difficult to establish rapport with patient in view of constrained, inhibited personality. Psychotherapeutic explanations and interpretations not fully accepted. On discharge patient considerably improved and rash less frequent and severe but still occurring at intervals.

Follow Up: (2 years) No marked change in condition.

Case No. 192. L.W. Male; Married; Aged 30.

Urticaria present $2\frac{1}{2}$ years.

History: Patient of Polish origin. Family and early

personal history appear normal. Majority of family killed during German occupation of Poland. Patient's early adjustments seem normal; no history of nervous disturbance or neurotic traits. As a student when Poland invaded sent to forced labour camp and for membership of sabotage group interned in concentration camp. During stay there had traumatic experience of hanging own friends who had committed misdemeanours. Eventually escaped from German prison and reached occupied France where became member of resistance group; subsequently joined British Forces and served as paratrooper at Arnhem. Married Welsh girl and worked as radio engineer in Wales. Two children of marriage. Marriage unhappy due to incompatibility with spouse and interference by relatives-in-law. Onset of urticaria when patient very excited and heated at party, demonstrating conjuring tricks. With attacks of urticaria experienced malaise and general upset. Very disturbed by same and worried incessantly over rash and apprehensive of its recurrence.

Attacks preceded by emotional disturbance, tension and fatigue. Patient could predict severity of urticaria by intensity of preceding emotional upset or depression.

Patient very resentful of domestic situation and of interference by wife's relatives. If upset in this way and resentment aroused, rash usually very severe. Emotional lability marked and reaction to wife on immature level. Personality fairly well adjusted socially but anxious, very tense, individual with considerable drive. Very restless and unable to relax. Obsessional and over-conscientious in attitude to employment and works excessively long hours. Many attacks of urticaria associated with evening fatigue after long trying day. Gradual development of anxiety reaction relating to attacks becoming more frequent, severe, and incapacitating.

Treatment: Treated as inpatient with modified insulin, ether abreactions and psychotherapy. Denied guilt for incidents in concentration camp but same revealed under abreactions. However, main stress in domestic relationship, and resentment to wife and relatives great. Fair improvement after insulin and abreaction; became considerable following discussion with wife and improvement in her attitude to patient.

Follow Up: Patient remained well for 18 months, with infrequent attacks of urticaria of minor severity. Then took intensive course in television maintenance and during examination for same, experienced most severe attack since discharge from hospital. Subsequently relations with wife deteriorated again and attacks became frequent and severe, although not to extent before admission to hospital. Would have attack on way home at night if delayed at work and resentful of the anticipated quarrel which would develop. Subsequent psychotherapy of little help as marital relations deteriorated steadily and ultimately patient and wife separated. Noteworthy that urticarial eruption could be induced by recall of hostile feelings to wife and relatives under abreaction; also if patient severely embarrassed or emotionally disturbed at interview would blush readily and subsequently develop minor urticarial eruption.

DYSHYDROSIS.

Case No. 51. A.E.D. Male; Married; Aged 48.

History of dyshidrotic pompholyx for three months.

History: Family history normal. Patient overprotected as youngest child. Child, school and work adjustments normal. No evidence of psychiatric disturbance until 1940 when during evacuation of St. Nazaire developed hysterical amnesia, followed by anxiety state. Invalided from Army, 1940, as psychoneurotic. Since then anxiety state continued associated with marital discord, with a chronic neurotic, domineering, sexually frigid, incompatible wife. Family situation grossly abnormal, with wife domineering husband and only child by her chronic neurosis. Under her influence family most seclusive with little outside social contacts.

Patient chronically anxious, inadequate person. In 1940 at height of anxiety reaction, had neurodermatitis of scalp and neck. In 1948 following financial loss by destruction of garage and car by fire, developed eczema of hands. In 1952, developed skin rash on hands, at first believed occupational but later continued as

dyshidrotic pompholyx. When admitted was in a state of acute agitated anxiety. Expressed great concern regarding hands and considerable hostility towards wife. Marital discord aggravated by enforced stay at home due to skin disorder.

Treatment: Patient treated with course of modified insulin. Superficial psychotherapy devoted to improvement in attitude to personal and domestic problems. Patient symptom-free within three weeks and hands completely clear.

No history of associated hyperhidrosis.

Follow Up (18 months). No further breakdown in psychiatric health or recurrence of skin condition.

Case No. 83. S.K. Male; Married; Aged 30.

History of hyperhidrosis from 11 years of age. Persistent since, with short-lived remissions and frequent exacerbations, some associated with dyshidrotic pompholyx.

History: Family background good and childhood and school adjustments normal. Work record stable as draughtsman but recent difficulty in passing important examination. Marriage happy but complicated by domineering, interfering mother-in-law. Social adjustment only fair but endeavours

to compensate for same by variegated social activities. Significant history of neurotic disturbance from 1941. Stammer since then of variable intensity and severely aggravated by emotional disturbance or embarrassment. In 1952, attack of hysterical amnesia associated with excessive work worry and anxiety regarding wife's health.

Hyperhidrosis of hands since aged 11 years. Began following incident in which acid bottle spilled on hands and burns prevented only by prompt action of schoolmaster. From then, if patient picked up acid bottle noticed hands tingling and sweating excessively. Subsequently, hyperhidrosis became persistent and source of considerable embarrassment to him. At 14 years of age developed hyperhidrosis of feet associated with traumatic incident relating to stay in hospital awaiting an appendicectomy. Hyperhidrosis of feet constant, but fluctuates on hands. Attacks of cheiropompholyx have in some instances been associated with preliminary cessation of sweat secretion from hands followed by, after very short interval, appearance of cheiropompholyx vesicles. Threshold for reaction to stress is low, and patient in a state of constant anxious tension for many years. Latter so extreme that he has tried on several occasions to sit examination but failed,

due to panic attack enforcing retreat from examination room.

Patient admitted to hospital following attack of amnesia in 1952.

Treatment: Modified insulin; ether and methedrine analysis and abreactions; intensive psychotherapy.

In course of same manifested great hostility to mother-in-law with whom he resides and considerable anxiety over wife, who is dominated by mother, and whose state of health involves an ever-present fear of pregnancy.

Patient improved rapidly with treatment and when discharged was symptom free, the hyperhidrosis having almost completely disappeared.

Follow Up: Patient remained well for nine months then developed recurrence of hyperhidrosis associated with further domestic stress and financial anxiety. Relieved by outpatient psychotherapy, and patient well for further six months when condition recurred again, associated with similar stress factors. Condition variable since, until February 1954, when he disappeared following the loss of a considerable sum of borrowed money in a building venture which failed. His body was discovered some 4 weeks later. Suicide was presumed.

PRURITIS ANI.

Case No. 58. D.R.E. Male; Married; Aged 53.

History of Pruritis Ani for twelve years. Episodic to begin with; continuous for some 2 - 3 years.

History: Family background normal. Patient brought up in happy working class home as member of large family. No abnormalities in school or work record. Child, adult and marital adjustments all appear normal.

Symptoms of mild anxiety state for 13 years, related to work stress as overman in colliery under difficult conditions. Subsequently discharged with pneumoconiosis and several years unemployment before present occupation as sawyer. Basic personality fairly good, but always anxious and overconscientious and minor feelings of inadequacy. Over compensates for latter with brisk driving attitude. Very health conscious and ardent follower of popular regimes of physical and health culture. Particularly conscious of bowel function and regular user of aperients.

Development of pruritis ani in relation to suspected slight attack of haemorrhoids. No definite proof of latter and onset coincided with period of extreme anxiety, tension

and fatigue from excessive work and responsibility. Pruritis disappeared coincident with relief of this stress; subsequently he developed neurodermatitis of scrotum with episodic attacks of pruritis ani related to emotional disturbance, strain or worry. Became obsessively preoccupied with the pruritic region. Unless mind actively occupied would worry about pruritis and neurodermatitis; if both quiescent, would be apprehensive of their recurrence. Elaborate ritual of behaviour to avoid irritation of affected region. Recent flare-up of neurodermatitis and exacerbation of pruritis ani, related to development of cancerophobia. Informed haemorrhoids led to cancer. Associated same with his belief as to cause of pruritis ani. Two close friends had died of cancer of rectum in recent years. Extremely anxious that his condition might be precursor of similar cancer.

No evidence of sexual or marital disturbance other than mild sexual inhibition appropriate to level of culture. No suggestion of homosexual trends.

Treatment: Treatment by psychotherapy directed to elucidating fears related to pruritis ani and relieving anxiety of same. Patient reacted well to treatment and

after six interviews was symptom free.

Follow Up (2 years). Symptoms have not recurred. No irritation from skin since discharge.

Case No. 79. A.J. Male; Unmarried; Aged 34.

History of pruritis ani for 15 years. Condition more or less continuous with phasic exacerbations.

History: Very disturbed family background with rejecting incompatible parents. Reared from aged 12 by rigid domineering uncle. Atmosphere in uncle's home unsatisfactory with marital incompatibility and general disharmony. All patient's family nervous and unnecessary worriers. Mother also has pruritis ani. Patient's early years unhappy. Educated to 18 years and left home as soon as able. Returned to own home following war-time service, as felt mother required support in view of strained relations with father. Considerable tension between patient and father.

Basic personality poor with marked inadequacy and inferiority. As a child, socially inhibited, and enuresis until five years. Subsequent continuation of social maladjustment. Sexually inhibited with venereophobia.

Patient aware of personality inadequacies and anxious to overcome same.

Pruritis ani and neurodermatitis of scrotum since 19 years. Onset associated with period of acute personal unhappiness related to termination of a heterosexual friendship. Pruritis continuous since; severe during night but rarely troubles in day. Venerophobia persistent for many years and recent development of phobic anxiety related to cancer of prostate. Patient thought pruritis possibly symptom of same. Poor heterosexual adjustment and severe masturbation guilt, related to fears of cancer of prostate. Exacerbations of pruritis often related to increased tension particularly if of sexual nature. Patient has high rigid moral standards and earnestly endeavours to control masturbatory urges.

Treatment: Psychotherapy as outpatient aimed at improving social and sexual adjustment and relieving hostility situation in home. Patient still under treatment, but with psychotherapy, adjustment much improved and home situation much less tense. Relations with father improved. Pruritis almost disappeared and confined to occasional infrequent episodes during the night.

N.B. History of mutual masturbation at 16 years for some months with cousin of same age. No evidence that same motivated by other than curiosity. Subsequent sexual activities completely heterosexual, and no suggestion of homosexual leanings. Sexual maladjustment essentially linked with social difficulties.

Two miscarriages since marriage. After considerable friction with present husband patient of consorting with farm hand. Apologies made, but patient blames husband for miscarriages. Feels in-laws still hostile to her and becomes tense and anxious on the subject. Nervous began following above incident. Feels occasionally disturbed and particularly on visiting in-laws. Feels work on farm a great deal more life than as compared with town. Feels on moment. Resentful to husband for present situation.

PRURITIS VULVAE.

Case No. 69. E.M.H. Female; Married; Aged 25.

History of pruritis vulvae for two years.

Irritation continuous with exacerbations. No gynaecological abnormalities.

History: Patient only child of well-to-do parents.

Overprotected and spoiled but excellent early, school, and social adjustments. Married aged 19 years to farmer. Gave up former work in office and worked on farm with husband. Marital relationship good but sexual intercourse unsatisfactory. Two miscarriages since marriage; the second occurred after considerable friction with parents-in-law who accused patient of consorting with farm hand. Accusation unfounded and apologies made, but patient blamed incident for miscarriage. Feels in-laws still hostile to her and becomes tense and anxious on their daily visits. Pruritis began following above incident. Always worse if emotionally disturbed and particularly in relation to in-laws. Feels work on farm stressful and present life hard as compared with former protected environment. Resentful to husband for present situation. Symptoms of anxiety state for two years; preceded onset

of pruritis. Sexual relations almost ceased since development of pruritis. Fears further pregnancy but has always disliked sexual side of marriage.

Treatment: Patient treated by two psychotherapeutic interviews as outpatient. Freely discussed personal and environmental difficulties and allowed to ventilate hostility. Anxiety and tension dispelled by psychotherapy, and attitude to husband and in-laws improved. Pruritis relieved by treatment.

Follow Up. (1 year). Patient free of anxiety and of pruritis for past year.

Case No. 92. G.R.L. Female; Married; Aged 21.

History of pruritis vulvae for two years.

Continuous with exacerbations.

History: Patient elder of two children. Family background disturbed by mother's overattachment to son and rejection of patient. Latter over-dependent on father. Home moderately unhappy due to narrow religious atmosphere and frequent quarrels between patient and brother. Adjustment poor since childhood with neurotic traits of fair degree. School, work and social adjustments in keeping with above. Mixed

reasonably well but inadequate in social relationships and easily upset by minor disturbance of same. Married three years. Marriage unhappy due to sexual maladjustment and incompatibility of temperament. Patient very immature, hysterical girl and difficulty in adapting to placid normal husband. Pruritis vulvae began two months after marriage. On two occasions when away from husband for long period pruritis ceased, to return when marital relationship resumed. Sexual intercourse unsatisfactory and infrequent since development of pruritis. Has psoriasis of scalp and vagina; non-irritant. Patient afraid of conception. Pregnant on one occasion since marriage, but self-induced abortion. No guilt over same but resentment to husband for causing this situation.

Long history of minor functional disorder and symptoms of chronic hysteria. Main stress to her in marital relationship is sexual maladjustment. Feels very jealous when husband obtains satisfaction and desires to deny same to him. In constant fear of further pregnancy. Also stress over poor living conditions and material inadequacies of present home as compared with former domicile. Considerable hostility to mother and brother, and resentment to

father for not paying greater attention to patient.

Exacerbations of pruritis associated with increased emotional disturbance. Latter mainly related to marital relationship or visits to parental home. Pruritis worse after coitus.

Treatment: Treated by psychotherapy directed at improving sexual and general adjustment. Gradual improvement over four interviews but further progress prevented by patient becoming pregnant. Hysterical reaction to pregnancy but same improved by psychotherapy, and ultimate superficial acceptance of situation with improvement in general symptoms and pruritis.

PRURITIS.

Case No. 94. W.L. Male; Unmarried; Aged 41.

Pruritis, mainly of face and scalp but frequently generalised, present for past two years.

History: No abnormalities in family history. Patient always quiet and reserved; mixed badly and childhood and subsequent adjustments poor. Sexually inhibited and most unwilling to discuss sexual relationships. Never had any close heterosexual friendships. Employed as miner until six months before onset of pruritis. Was involved in severe accident in which buried for 12 hours. Now afraid to return to underground work.

Onset of pruritis six months after accident. Period of anxiety and depression intervening, with frightening dreams of accident. Onset of pruritis associated with dysuria and frequency. Felt warm flush passing over body on passing urine and pruritis began thereafter. Attacks of pruritis become progressively more frequent and severe since onset. Now feels people notice that he is itching, and that when they scratch it is because he has infected them. Prior to pruritis little social activity, but since onset has withdrawn further. No hallucinations. Symptoms of progressively deepening anxiety state since accident in

coal-mine. Always inclined to blush excessively, and facial flushing with associated heat and pruritis almost continuous in recent months. No earlier history of nervous disturbance but functional dyspepsia, subsequently diagnosed as peptic ulcer, present for many years. Evidences guilt over sexual activities in hostile, guilty, embarrassed reaction to questioning on same. Denies anxiety over venereal disease but requested he be investigated for same.

Exacerbations of pruritis associated with episodes of emotional disturbance or social embarrassment. Patient still clings to view that some abnormality of urine function responsible for pruritis phases. Intelligence of low order.

Treatment: Essentially symptomatic with reassurance and explanation as far as possible within limits of patient's intelligence. Subsequently lapsed from attendance.

Follow Up. (1 year). Patient free of pruritis since shortly after discharge and working normally as gardener.

Case No. 188. J.T.W. Male; Married; Aged 59.

Intermittent pruritis of chest for 20 years; more persistent and severe in past three years.

History: Family history very disturbed with psychotic mother. Mother admitted to mental hospital when patient aged 12 years. Died there some years after. Father domineering, aggressive personality lacking in display of affection. Younger brother academically brilliant and preferred by father. Home atmosphere unhappy due to faulty parental relationship and mother's mental illness. Patient always shy and retiring. Minor neurotic traits from early childhood. Sibling rivalry to younger brother. Masturbation with extreme guilt from aged 12 years. Married frigid wife lacking in display of affection. Marriage initially marred by ejaculatio praecox and sexual relations abandoned for past 30 years. Took no advice about sexual difficulties as believed due to masturbation. Latter continued with extreme guilt up to present day. Of superior intelligence with higher grade education. ~~Is~~^S a high executive officer in Civil Service. Work relationships unsatisfactory. Unhappy in present post and looking forward to early retirement. Very active in religious affairs and well known local lay preacher.

Pruritis began following prolonged period of confinement to bed with sciatic neuritis. Has occurred at intervals since, mainly precipitated by exposure of

chest to the air or comes on spontaneously in bed, waking him from sleep. Strong sensuous component in pruritis and scratching of same of orgiastic quality. Describes simultaneous pruritis and sexual excitation, the latter relieved by bout of furious scratching. Sensuous pleasure from manipulations of chest, such as continuous towelling after bath. Can relieve nocturnal pruritis by taking up particular position in bed where pressure is applied to chest. This also is favourite masturbation position and latter usually occurs as sequel. Masturbation orgasm and relief of pruritis not necessarily associated but frequently so. Associated pruritis of scalp. Of seborrhoeic constitution with long history of furunculosis. Also has severe axillary hyperhidrosis.

Symptoms of chronic anxiety state for many years. Mainly associated with guilt over masturbation and frequent sexual phantasies partly inspired by pornographic forms of detective literature. Great difficulty in reconciling sexual disturbance with religious attitudes. Denies hostility to wife but feels guilty that he has abandoned sexual act. Denies homosexual feelings although appearance and attitudes strongly suggests same. Personality inadequate, anxious and obsessional; considerable drive

and persistency. Has difficulty in expression of emotions and aggressions and controls same rigidly. General personality make up is rigid, with superficially high standards of morality. Lacking in adaptability and shows considerable dependency and repressed hostility.

Treatment: Patient treated as an outpatient by psychotherapy aimed at expression of guilt feelings and hostility, and readjustment of sexual attitudes as far as possible. Difficulties at work solved by retiral. This act relieved considerable part of anxiety. Ventilation of guilt and hostility feelings also greatly appreciated and patient's general adjustment very considerably improved. Attitude to sex improved with permissive approach of therapist. Marital sexual readjustment impossible in view of length of history but patient now able to cope with personal sexual problems. Exhibition of stilboestrol reduced libidinal drive and sexual conflicts therefore less prominent. Pruritis greatly improved on discharge. Of infrequent occurrence and mild intensity. Patient described himself as feeling better than for many years.

Follow Up. (1 year). Further crops of furuncles had

occurred but pruritis was still relatively quiescent and patient's general adjustment much improved.

SEBORRHEIC DERMATITIS.

Case No. 81. K.L.J. Male; Married; Aged 25.

History of seborrheic dermatitis for 4 years.

Skin condition recently continuous with exacerbations.

History: Patient only child of overprotective mother; always insecure and timid; neurotic traits minimal.

Childhood and adult adjustment fairly normal; mixed well, but uneasy in social relationships, and blushed very readily. Worries readily and unnecessarily.

Happily married 6 months. Heterosexual activities on immature promiscuous level. No frank history of nervous disturbance other than period of dyspepsia when in uncongenial employment. Work record somewhat unstable; unable settle down for long in one employment.

Skin condition began 4 years ago. Patient making sausages in confined space, noticed pricking sensations on arms and worried in case due to suspected maggots in sausage meat. Subsequently developed localised dermatitis on arms secondary to scratching. Patient worried over small area of dermatitis and latter gradually spread; subsequently developed generalised dissemination secondary to emotional disturbance. Patient worried excessively about skin and would watch

carefully for least sign of spread; in event of latter would become acutely anxious and ~~a~~ massive dissemination would ensue. Latter would occur most rapidly in association with any period of strain or emotional disturbance.

Treatment: Treated as inpatient with modified insulin, followed by narcosis; patient very unsettled in ward and insulin produced only moderate benefit. Subsequent narcosis of greater value, and although rash still disseminated, patient stated skin now relatively non-irritant. Major difficulty with patient was his attitude to skin; was filled with panic at least hint of spread. Psychotherapy aimed at altering this attitude, with moderate success.

Follow-up: (6 months) Patient's improvement continued. **S**kin rash present, but considerably diminished in area; no longer major anxiety to patient as before. **F**eels much less anxious about same.

Case No. 170. G.J.P. Male; Married; Aged 52;

Seborrheic dermatitis for 3 years; skin condition on the whole, episodic.

History: Patient one of large family; family background

moderately~~/~~disturbed by domestic strife. Always insecure; timid disposition, with poor confidence and sensitive to criticism. No specific neurotic traits. Childhood, school and social adjustments in keeping with inadequacies of personality. Inhibited in sexual relationships. Married aged 48, a widow with 2 children. Relations good with wife, but considerable domestic strife due to interference of mother and sister-in-law. Employment record stable in semi-skilled occupation. No frank history of nervous disturbance.

History of sycosis barbae in 1944. Cleared rapidly with treatment. Seborrheic dermatitis of back in 1949, related to period of stress associated with relatives-in-law. Subsequent discrete flare-ups, each precipitated by period of considerable emotional disturbance. Feels resentful and hostile to relatives-in-law; mixed resentment and anxiety regarding wife and marital relationship. Exacerbations usually associated with circumstances where resentment restrained for considerable period being ventilated in angry outburst.

Treatment: Patient treated with modified insulin and psychotherapy with complete remission of symptoms.

Psychotherapy aimed at improving general adjustment, and at the ventilation of grievances to wife and relatives.

Follow Up. (2 years). No further attacks. Domestic situation improved, but conflict with relatives still active.

ATOPIC ECZEMA.

Case No. 7. G.H.A. Male; Married; Aged 23.

Eczema since early childhood. Short remission periods, but on the whole continuous, with recent aggravation. Mild attacks of asthma since childhood.

History: Patient younger of two. Over-protected by mother and hostile relationship with domineering critical father. Childhood and early adult adjustment poor. Mixed to some extent but very self-conscious of skin. Fairly good heterosexual relationships, if to some extent inhibited. Work record stable - has occupied present job for six years. Dissatisfaction with same as feels could do better but lacks initiative and drive to take necessary examinations or find more suitable job. Married one year. Marital relationship unsatisfactory as some incompatibility. Wife over-protected only child with similar immature attitudes as patient.

Long history of frequent quarrels with father and sister. Patient resented their critical attitudes to him and was openly hostile. Ordered to leave home on several occasions by father. Severe quarrel when patient announced news of intended marriage. Father did not attend wedding and now son visits mother only when father

at work. Has recently visited home much less frequently and feels guilty of neglecting mother. Symptoms of chronic anxiety state for years. Tendency to greater social withdrawal in recent years. Always dissatisfied and vaguely unhappy. Unable to relax properly or concentrate, and sleep poor. Lies awake worrying over minor upsets of day and usually scratching furiously. Personality immature, inadequate and inferior, lacking in drive and persistency. Chronic worrier and constantly anxious.

Skin reaction mainly persistent from early childhood. Rash aggravated by emotional disturbance, excitement or heat. Further exacerbations of rash associated with apprehension of social occasions, or minor quarrels with wife. Has few friends and no longer mixes. Feels a frustrated, unhappy failure. Marital sexual relationship appears normal.

Treatment: Treated as outpatient with psychotherapy aimed at free expression of hostility to parent and sibling, elimination of guilt, and improving social and general adjustments. Patient improved considerably. The rash became localised to a small area and occurred much less frequently and less severely. Social adjustment improved, but impossible to alter relationship with parent and sister.

Follow Up. (15 months) Improvement in skin and adjustment has continued.

Case No. 91. W.M.L. Male; Unmarried; Aged 21.

Atopic eczema since infancy; persistent with exacerbations. Asthma since childhood.

History: Patient only child of second marriage of father. Two step-siblings. Family background fairly normal but parents not overtly affectionate. Both over-solicitous of patient's welfare due to his early ill-health. Patient not allowed to play or mix freely for this reason and very resentful over way in which liberties curbed. Childhood moderately unhappy due to parental restrictions and lack of demonstrated affection. Father, rigid, religious person and home atmosphere strict. Considerable rivalry between patient and step-sister.

Childhood adjustment only fair due to restriction of social and sporting activities, but relationship with schoolmates appears normal. Work adjustment fair. Endeavoured to find employment away from home. Feels very hostile to parents and step-sister, particularly to father for critical attitudes. Even as adult, whatever patient wished to do father would criticise that physically

not capable of doing same. Patient worked on Irish Channel Steamers for period, during which time felt happy and free. After one year reported as having dermatitis and paid off. Very disturbed by the event and rash flared up. Subsequent work history erratic and interrupted by exacerbations of rash and periods at home or in hospital. Social adjustment fairly good but considerable heterosexual inhibition. Marked guilt over one sexual relationship and over masturbation. Feels very guilty if wakes up in morning and finds has scratched during night. Exacerbations often follow nocturnal scratching.

Patient distinctly relates exacerbations of rash to emotional disturbance. Specifically requested to see Psychiatrist in view of this appreciated association. Situations in which feels hostility or anger are potent in causing aggravation of rash. Rash always worse if at home.

Recent social and heterosexual adjustment poorer and patient developed mild ideas of reference. Felt depressed and pessimistic about future.

Personality inadequate and moderately immature, with feelings of inferiority. Fair degree of assertiveness and drive, but lacking in persistency. Aware of dependency trends and rebels against same. Sociable, but recent

difficulty in mixing.

Treatment: Treated as inpatient with modified insulin and psychotherapy. Improved with modified insulin. Less tense and anxious and general symptoms of anxiety state relieved. Rash improved but still present. Continued with ether abreactions in which allowed to freely ventilate hostility to parents. Latter very deep and intense. Very great improvement after abreactions. Psychotherapy continued in direction of relieving hostile and guilt feelings, and improving general and social adjustment. Advised to secure employment away from home.

Follow Up. Has been seen at intervals for nine months and has remained well except for minor, very short-lived, recurrences. Latter infrequent and invariably associated with emotional disturbance. Working away from home. Has returned home once when rash began to flare up again. Relieved on return to Cardiff. General adjustment much improved. Has remained in same job since discharge and has numerous friends of both sexes. Now active socially.

NEURODERMATITIS.

Case No. _____ W.T.C. Male; Married; Aged 54;

Exudative neurodermatitis of limbs for $3\frac{1}{2}$ years, continuous with exacerbations since onset.

History: Background of considerable family disturbance with alcoholic, brutal father. Patient reared by grandmother until 7 years old. On her death returned to parents until 11 years, when went to work on a farm. Home most unhappy and patient very resentful of father's rejection and behaviour. Childhood, social and adult adjustment fairly normal. Somewhat inadequate, anxious, rigid individual who pompously over-compensates for inner lack of confidence. Won M.M. in first world war. Stable work record as farmer and collier, in recent years combining both jobs.

Prior to onset of dermatitis involved in unpleasant accident in pit. Patient responsible for tram haulage apparatus; for some unknown reason rope worked loose and caught a youth who was killed under moving trams. Patient denied negligence for accident, but felt guilty and ashamed before workmates; particularly upset as youth killed was of low intelligence, and to whom patient had adopted a special, protective, paternal attitude. Also

at this time strain of farm and colliery work affected him more than usual. Resentment to son for not assisting more with farm work.

Against background of complex emotional disturbance of guilt, shame, resentment and anxious tension, neuro-dermatitis developed. Subsequent exacerbations related to fatigue, anxiety or episodes of emotional disturbance. Each time patient improved and attempted to return to mining, rash recurred.

Treatment: Patient treated with modified insulin; abreactions and psychotherapy directed to ventilation of disturbing emotions. Improved greatly with modified insulin. Subsequent abreactions only of moderate ~~Further~~ benefit. In abreactions freely ventilated hostility to parents and to son, and expressed guilt and remorse for accident in pit. Although latter apparently not his fault, yet felt guilty and responsible.

Follow Up. (2 years). Patient has continued well with no further exacerbations of rash; has partially relieved conflicts by confining work to farming. No further psychiatric disturbance.

Case No. 34. Mrs. W.C. Female; Married; Aged 48;

History of neurodermatitis for 4 years, condition continuous with exacerbations.

History: Youngest of 3; overprotected by indulgent mother. "Delicate" child with minor neurotic traits; always timid and inadequate. Childhood, school and work adjustments fairly normal. Moderate difficulty in social relationships; emotional constraint and sexual inhibitions. Work record stable until married. Married aged 29, and one son aged 12 years. Relations with husband fairly good, but considerable discord over hostile attitude of father to child. Patient greatly upset by situation; latter intensified in recent years. Patient's anxiety ^{augmented} ~~eliminated~~ by development of neurotic disturbance in child. Resentful to husband for attitude to son. Sexual relations ceased for many years; fears further conceptions. Recent increased tension and anxiety related to diminished trade in family business. Patient responsible for domestic work of home and assists in running shop; carries all financial responsibility for latter. Development of anxiety symptoms in relation to worries over child and business. Slept poorly, and with excessive work felt unable to cope further; unduly strained with situation.

Neurodermatitis developed and has continued since with exacerbations related to fatigue or emotional disturbance.

Treatment: Treated as outpatient with psychotherapy.

Patient freely ventilated resentment to husband and anxieties in domestic life. Psychotherapy aimed at manipulation of environment and relief of conflict situations, and improvement in general adjustment. Patient improved considerably under treatment, and after several interviews rash had almost cleared.

Follow Up. (1 year). Rash has cleared and no recurrence since. Symptoms of anxiety state relieved, and patient now better able to cope with difficulties in home and business, which still persist.

George Allen & Unwin, Ltd., London

(1944). *Med. J. Lond.* 4, 397.

(1952). *Psychosomatic Rev.* 11, 17

BIBLIOGRAPHY.

(1931). *Brit. Jpn.* 66, 228

(1942). *J. Psychol. Med.* 3, 1.

(1939). *Proc. R. Soc. Med.* 37,

(1943). *On Human Emotions in Love*

in *Psychology*, R.M.S. *Psychosomatic*

(1938). *Am. Psychiatric* 3, 12

(1939). *Am. J. Hygiene* 4, 1

(1931). *Am. J. Hygiene* 4, 1.

(1950). *J. Psychol.* 30, 241.

(1932). *Arch. Derm. Syph.* 45, 32

(1947). *Western Dermatology & Syph*

J. H. Lloyd-Lowe, Co., Philadelphia

(1949). *Med. Clin. N. Amer.* 33

(1948). *Arch. Derm. Syph.* 57, 10

(1938). *Ann. N. Y. Acad. Sci.* 42, 8

(1938). *J. Psychol.* 30, 241.

(1938). *In "Psychiatric Treatment"*

Ann. Derm. Syph. 57, 10. The William

- BRAMSON, H.A. (1941). Psychosom. Med. 8, 435.
- CKERMAN, N. W. (1939). Psychosom. Med. 1, 366.
- ALEXANDER, F. (1952). "Psychosomatic Medicine".
George Allen & Unwin, Ltd., London.
- ALLEN, D.S. & O'BRIEN, J.P. (1944). Med. J. Aust. 2, 335.
- ALLENBY, R. (1932). Psychoanalyt. Rev. 19, 152.
- ALLINGTON, H. V. (1952). Arch. Derm. Syph. 66, 316.
- BRUTZ, S. (1915). J. Psychol. Neurol. 21, 1.
- BALYEAT, R. M. (1929). Amer. J. Dis. Child, 37, 1193.
- BARBER, H. W. (1948). In "Modern Trends in Dermatology",
ed. Mackenna, R.M.B. Butterworth, London.
- BARINBAUM, M. (1932). Zbl. Psychotherap. 5, 106.
- BARTHELEMY, L. H. (1938). Psychoanalyt. Quart. 7, 216.
- BECK, S. J., RABIN, I. A., THIESEN, W. G., MOLISH, H.
& THETFORD, W. N. (1950). J. Psychol. 30, 241.
- BECKER, S. W. (1932). Arch. Derm. Syph. 25, 655.
- BECKER, S. W. & OBERMEYER, M. E. (1947). "Modern Dermatology & Syphilology".
J. B. Lippincott Co., Philadelphia.
- BECKER, S. W. (1949). Med. Clin. N. Amer. 33 : 3
- BEINHAEUER, L. G. (1948). Arch. Derm. Syph. 57, 109.
- BENDER, M. B. (1938). Amer. J. Physiol. 121, 609.
- BERLE, B. H. PINSKY, R.H. WOLF, S.
& WOLFF, H.G. (1952). In "Psychiatric Treatment". Res. Publ.
Ass. nerv. ment. Dis. The Williams & Wilkins
Co., Baltimore. p. 167.
- BESNIER, E. (1892). Ann. Dermat. Syph. 3, 634.
- BETTLEY, F. R. (1950). In "Modern Practice in Dermatology",
ed. Mitchell-Heggs, G. B., Butterworth, London.
p. 218.

BICKFORD, R. G.

(1938). Clin. Sci. 3, 377.

BIEN, E.

(1933). Psychoanalyt. Rev. 20, 186.

BISHOP, G. H.

(1948). J. invest. Dermat. 2, 143.

BLAISDELL, J. H.

(1932). Arch. Derm. Syph. 25, 205.

BLANK, H. & BRODY, M. W.

(1950). Psychosom. Med. 12, 254.

BLOCK, B.

(1927). Klin. Wschr. 6, 2271.

BONJOUR, J.

(1924). Schweiz. Med. Wschr. 54, 748.

BONJOUR, J.

(1929). Brit. J. Dermat. 41, 324.

BRACK, W.

(1935). Deliberations IX, Internal Congress
Dermatologia. Bp. 1, 129.

BRANDT, R.

(1950). J. invest. Dermat. 14, 81.

BROCQ, L. & JACQUET, L.

(1891). Ann. Dermat. Syph. 2, 193.

BRUNNER, M. J.

(1948). Arch. Derm. Syph. 57, 374.

BRUNSTING, L. A.

(1936). Arch. Derm. Syph. 34, 935.

CALINAN, C. D. & O'NEILL, D.

(1952). Trans St. John's Hosp. Dermat. Soc. 31, 12.

CHALMERS, T. M. & KEELE, C. A.

(1949). J. Physiol. 109, 31 P.

CHALMERS, T. M. & KEELE, C. A.

(1951). Ibid. 114, 510.

CHALMERS, T. M. & KEELE, C. A.

(1952). Brit. J. Dermat. 64, 43.

CORMIA, F. E. & SLIGHT, D.

(1935). Canad. Med. Ass. J. 33, 527.

CORMIA, F. E.

(1947). Arch. Derm. Syph. 55, 601.

CORMIA, F. E.

(1951). Brit. J. Dermat. 63, 83.

CORMIA, F. E.

(1952). J. invest. Dermat. 19, 21.

CROSSLAND, J.

(1951). Ph.D. Thesis, University of Wales.

CROSSLAND, J.

(1953). J. ment. Sci. 99, 247.

CROSSLAND, J.

(1954). J. Physiol. in preparation.

CZEJMY, A.

(1905). Jarhb. f. Kinderh. 61, 199.

- AVIS, D. W. & BICK, J. W. (1946). *J. nerv. ment. Dis.* 103, 503.
- BSAUX, A. & ANTOINE, E. (1936). *Nutrition, Paris.* 6, 55.
- DEUTSCH, F. & NADELL, R. (1942). *J. invest. Dermat.* 5, 87.
- DEUTSCH, F. (1950). *Acta Med. Orient.* 9, 8.
- DEUTSCH, F. (1952). *Psychosom. Med.* 14, 287.
- MEHE, S. H. (1948). *Endocrinology.* 42, 315.
- MEHL, F. & HEINICHEN, W. (1931). *Munch. med. Wschr.* 78, 1008.
- DOWLING, G. B. (1939). *Brit. J. Dermat.* 51, 1.
- DUECK, C. J. (1943). *J. nerv. ment. Dis.* 97, 528.
- DHRING, L. A. (1885). *Am. J. med. Sc.* 89, 94.
- DUNBAR, H. F. (1938). *"Emotions & Bodily Changes"*, 2nd. Ed. Columbia University Press, New York.
- DUNBAR, H. F. (1939). *Amer. J. Psychiat.* 95, 1277.
- DUNBAR, H. F. (1946). *"Emotions & Bodily Changes"*. 3rd. ed. Columbia Univ. Press, New York.
- EASTWOOD, S. (1934). *Proc. R. Soc. Med.* 27, 1120.
- EBLING, F. J. (1948). *J. Endocrinol.* 5, 297.
- EDGEELL, P. G. (1953). In *"Emotional Factors in Skin Diseases"*.
- EICHLER, R. M. (1950). Thesis. State University of Iowa.
- In BENTON, A. L. (1950). *Brit. J. med. Psychol.* 23, 45.
- ELLER, J. J. (1929). *Med. J. & Rec.* 129, 481.
- ELLIOT, G. T. (1891). *J. cut. genit.-urin. Dis.* 9 : 321.
- EYSTER, W. H. ROTH, G. M. (1952). *J. invest. Dermat.* 18 : 37.
- & KIERLAND, R. R. (1945). *J. Physiol.* 103, 367.
- FELDBERG, W. (1930). *"The Psychology of Clothes"*. Hogarth, London.
- FLUGEL, J. C.

OX, Tilbury.

RENCH, T. M. & ALEXANDER, F.

SELHORN, E.

WILSON, T. E. & SHELLEY, W. B.

WILDEN, E. F.

WILLESPIE, R. D.

WOLDMAN, M.

WOLDSMITH, W. N.

WRAHAM, D. T.

WRAHAM, D. T.

WRAHAM, D. T. GOODELL, H.

& WOLFF, H. G.

WRAHAM, D. T. BRACE, W. PEARSON, R. S. B.

& COMEAU, W. J.

GREENHILL, H. M. & FINESINGER, J. E. (1942). Arch. Derm. Syph. 46, 187.

GUY, W. B.

HAIMOVICI, H.

HAIMOVICI, H.

HANSEN, K.

HARLEY, D.

(1873). "Skin Diseases". H. Renshaw, London, 1873.

(1941). Psychosomatic Medicine Monograph, IV.

National Research Council, Washington.

(1953). "Physiological Foundations of Neurology and Psychiatry". University of Minnesota Press, Minneapolis.

(1948). J. invest. Dermat. 2 : 137.

(1949). Psychosom. Med. 11, 273.

(1938). Brit. J. Dermat. 50 : 1.

(1941). M. Bull. Univ. Cincinnati. 8, 79.

(1934). Post. grad. med. J. 10, 242.

(1950). In "Life Stress & Bodily Disease".

Research Publications, vol. 29. The Williams & Wilkins Co., Baltimore, 1950.

(1950). J. Amer. Med. Ass. 143, 1405.

(1951). J. clin. Invest. 30, 37.

(1936). Clin. Science. 2 : 253.

(1952). Arch. Derm. Syph. 66, 1.

(1948). Proc. Soc. exp. Biol. N. Y. 68, 40.

(1950). J. appl. Physiol. 2, 512.

(1930). Nervenarzt. 3, 513.

(1950). In "Modern Practice in Dermatology".

ed. Mitchell-Heggs, G. B. Butterworth, London.

- ARMER, I. M. & HARRIS, K. (1926). Heart. 13, 381.
- HARRIS, H. J. (1944). Psychosom. Med. 6, 336.
- HEILIG, R. & HOFF, H. (1928). Med. Klin. 24, 1472.
- KELLIER, F. F. (1944). Brit. Med. J. 1, 583.
- KERMANN, F. PROSE, P. H.
& SUTZBERGER, M. B. (1952). J. invest. Dermat. 18, 71.
- KENWITT, M. (1951). Lancet. 2, 1105.
- KILL, W. R. (1950). In "Progress in Gynaecology". vol. 2.
Grune & Stratton, New York.
- KILL, L. W. (1952). Arch. Derm. Syph. 66, 212.
- KODGSON, G. A. (1945). Brit. J. Dermat. 57, 125.
- KODGSON, G. A. (1950). In "Modern Practice in Dermatology".
ed. G. B. Mitchell-Heggs. Butterworth, London.
- KOPKINS, J. G. KESTEN, B. M.
& HAZEL, O. G. (1938). Arch. Derm. Syph. 38, 419.
- KUBLER, W. R. (1949). Arch. Derm. Syph. 59, 293.
- KUNT, E. (1936). Lancet. 1, 592.
- KUNT, E. (1940). "Diseases Affecting the Vulvae".
- KINGRAM, J. T. (1939). Brit. Med. J. 2 : 5.
- KINGRAM, J. T. (1953). Lancet. 2, 346.
- KANOWITZ, H. D. & GROSSMAN, M. I. (1950). J. invest. Dermat. 14: 453.
- KALZ, F. (1945). Canad. Med. Ass. J. 53, 274.
- KARNAKY, K. J. (1945). TEXAS STATE med. J. 40, 630.
- KARTAMISCHEW, A. I. (1936). Derm. Wschr. 102, 711.
- KAYWIN, L. (1947). Psychosom. Med. 9, 131.
- KENNEDY, D. (1937). Brit. J. Dermat. 37, 42.
- KEEPCS, J. G. RABIN, A.
& ROBIN, M. (1951). Psychosom. Med. 13, 1.

SPACKS, J. G. ROBIN, M.

& BRUNNER, M. J.

STEIN, R. & HAIMOVICI, H.

LABER, R. & WITTHOWER, E.

LABER, R.

LAUDER, J. V.

LAUDER, J. V.

LEIN, H. S.

LOFFER, B. & KELLEY, D. M.

REIBICH, C.

REIS, J.

RESTIN, D.

ROONEIG, B.

RUSSKAL, W. H. & WALLIS, W. A.

KUNO, R.

LACEY, J. I. LEHN, R.

& FELS, S. S.

LACEY, J. I. BATEMAN, D. E.

& LEHN, R. V.

LEHMANN, C. T.

LEVINE, K. N. GRASSI, J. R.

& GERSON, M. J.

LEVINE, K. N. GRASSI, J. R.

& GERSON, M. J.

(1951 b). Psychosom. Med. 13, 17.

(1948). Proc. Soc. exp. Biol. 68, 40.

(1939). Brit. J. Dermat. 51, 501.

(1947). Brit. J. Dermat. 59, 1.

(1925). Am. med. Ass. J. 85, 1183.

(1936). J. nerv. ment. Dis. 84, 249.

(1949). Brit. J. med. Psychol. 22, 32.

(1942). "The Rorschach Technique".

World Book Co. New York.

(1926). Arch. Dermat. Syph. 152, 672.

(1937). Gynecologie. 36, 485.

(1927). Quart. J. Med. 21, 177.

(1911). cited by Dunbar, F.H. (1938).

"Emotions & Bodily Changes". 2nd ed. Columbia University Press, New York.

(1952). J. Amer. Stat. Assoc., 47, 583.

(1938). "Physiology of Human Perspiration".

J. & A. Churchill, Ltd. London.

(1952). Psychosom. Med. 14, 71.

(1953). Psychosom. Med. 15, 8.

(1930). Arch. Derm. Syph. 21, 449.

(1943). Rorschach Res. Exch. 7, 130.

(1944). Ibid. 8, 104.

- EVY, R. (1952). Psychosom. Med. 14, 41.
- LEWIS, G. M. & CORMIA, F. E. (1947). N.Y. State Med. J. 45 : 1889.
- LOBITZ, W. C. (1952). Am. med. Ass. J. 148 : 1097.
- LOBITZ, W. C. (1952 b). Arch. Derm. Syph. 66 : 152.
- LOEWENTHAL, L. J. A. (1949). Brit. J. Dermat. 61 : 403.
- LOEWENTHAL, L. J. A. (1950). In "Modern Practice in Dermatology". Butterworth. London.
- LUTZ, W. (1949). Dermatologica. 98 : 1.
- LYNCH, F. W. HINCKLEY, R. G. (1945). Arch. Derm. Syph. 51 : 251.
- & COWAN, D. W. (1952). J. A. M. A. 150 : 14.
- LYNCH, F. W. (1950). Acta dermat. venereol. 30 : 95.
- MARCOUSSEN, P. V. (1952). Brit. Med. J. 2 : 422.
- MASON, A. A. (1927). cited in "Emotions & Bodily Changes". H. F. Dunbar, Columbia University Press, N.York
- MAYER, A. Applied Psychology Monograph, No. 13.
- MEINCH. (1933). Psychoanalyt. Praxis. 3 , 30.
- MEYER, P. (1940). Rorschach Res. Exch. 4, 71.
- MALE, F. R. & HARROWER-ERICKSON, M.R. (1947). Fed. Proc. 6, 165.
- MILHORAT, A. T. & DLETHELM, O. (1936). Rev. franc. Derm. Venereol. 12, 388.
- MILIAM, G. (1948). Psychosom. Med. 10 : 274.
- MILLER, H. & BARUCH, D. W. (1942). Psychosom. Med. 4 : 82.
- MILLER, M. L. (1948). Psychosom. Med. 10 : 309.
- MILLER, M. L. (1950). Arch. internat. Allergy & Appl. Immunol. 1, 40.
- MILLER, M. L. (1947). Psychosom. Med. 9, 184.
- MITCHELL, H. CURRAN, R. & MYERS, S.T. (1947). Bull. Menninger Clin. 2 : 5.
- MITTELMANN, B.

DHR, G. GERARD, M. & ROSA, H.

(1925). cited in "Emotional Factors in Skin Disease" (1953). Witthower, E. & Russell, B. Cassell & Co. London.

OM, H. & LOUSITTOU, F.

(1943). cited in SONTAG, L. W. (1950).

ONS, W.

Arch. internat. Allergy & Appl. Immunol. 1, 50.

(1947). "Principles & Practice of the Rorschach Personality Test". Faber & Faber Ltd., London.

MONTAGNA, W. & HAMILTON, J. B.

(1949). Am. J. Anat. 84, 365.

MONTAGNA, W. & KENYON, P.

(1949). Anat. Rec. 103, 365.

McCORMAC, H. SANDIFER, P. H.

& JELLIFFE, A. M.

(1946). Brit. Med. J. 2 : 48.

MacKENNA, R. M. B.

(1923). "Diseases of the Skin".

McGlelland, Toronto.

MacKENNA, R. M. B.

(1944). Lancet. 2, 679.

MacKENNA, R. M. B.

(1950). Proc. R. Soc. Med. 43, 797.

MacKENNA, R. M. B. & MacALPINE, I.

(1951). Lancet. 1, 65.

NABER, J.

(1929). Therap. d. Gegenw. 70, 437.

NORRLIND, R.

(1946). Acta. Dermat. Venereol. 26, 1.

OBERMEYER, M. E. BLAIR, R. LEVITT, H. RUSH, S. STORHAN, M. A.

& GLENN, E.

(1952). Arch. Derm. Syph. 65, 291.

O'BRIEN, J. P.

(1947). Brit. J. Dermat. 59, 125.

O'DONOVAN, W. J.

(1950). In "Modern Practice in Dermatology".

ORMSBY, O. S. & MONTGOMERY, H.

(1948). "Diseases of the Skin". 7th ed.

Lea & Febiger, Philadelphia.

OWEN, J. R.

(1950). In "Modern Practice in Dermatology".

Butterworth, London.

PEARSON, C. H. J.

(1940). Psychosom. Med. 2, 22.

- PEARSON, C. H. J. (1940). Psychosom. Med. 2, 22.
- PHILLIPS, L. & ELHADJIAN, F. (1947). Psychosom. Med. 9, 364.
- PINES, C. MILLER, H.
& SULLIVAN, E. (1937). J. Allergy. 8, 168.
- RIESCH, E. (1951). Brit. J. Med. Psychol. 24, 202.
- RONDER, E. (1949). In Howell's "Text Book of Physiology".
W. B. Saunders Co. Philadelphia.
- ROTELUNAS, C. B. MEIXNER, M.
& HARDY, J. D. (1949). J. invest. Dermat. 12, 307.
- QUIROGA, M. I. MARINZI, A.
& CORTI, R. N. (1950). Medicina. 5, 347.
- RANDALL, W. C. (1946). J. clin. Invest. 25, 761.
- ROGERSON, C. H. (1934). Brit. J. Dermat. 46, 368.
- ROGERSON, C. H. (1937). Quart. J. Med. 6, 367.
- ROGERSON, C. H. (1939). Practitioner. 142, 17.
- ROGERSON, C. H. (1947). Brit. J. Dermat. 59, 6.
- ROMER, C. (1924). Klin. Wschr. 3, 354.
- ROSE, B. & BROWNE, J. S. L. (1938). J. Physiol. 124, 412.
- ROSENBAUM, M. (1945). Psychosom. Med. 7, 52.
- ROSTENBERG, A. (1949). Med. Clin. N. Amer. 33, 177.
- ROTHMAN, S. & COON, J. M. (1940). J. invest. Dermat. 3, 99.
- ROTHMAN, S. (1941). Physiol. Rev. 21, 357.
- ROTHMAN, S. & WALKER, S. A. (1951). Arch. internat. Allergy & Appl.
Immunol. 1, 306.
- ROXBURGH, A. C. (1947). "Common Skin Diseases". 8th ed.
H. K. Lewis & Co. London.
- SACK, W. T. (1922). Munch. Med. Wschr. 69, 148.

- ACK, W. T. (1926). Arch. Dermat. Syph. 151, 206.
- ACK, W. T. (1927). Dermat. Wechr. 84, 16.
- ACK, W. T. (1929). Nervenarzt. 2, 86.
- ACK, W. T. (1932). Arch. Psychiat. 98, 425.
- ACK, W. T. (1933). in Handb. d. Haut. u. Geschlechtskrankh. Julius Springer, Berlin.
- ADGERS, J. (1911). Jahrbuch Psychoanalyt. Forschungen. 3.
- ARGANT, W. (1951). Lancet. 2, 87.
- ARGANT, W. (1953). Brit. Med. J. 2, 800.
- AUL, L. J. (1938). Psychoanal. Quart. 7, 366.
- AUL, J. (1941). Psychosom. Med. 3, 66.
- AUL, L. J. & BERNSTEIN, C. (1941). Psychosom. Med. 3, 349.
- AUL, L. J. (1946). The Nervous Child. 5, 332.
- CARBOROUGH, L. F. (1948). Dis. Nerv. System. 9, 90.
- CHILDER, P. (1936). Psychoanal. Rev. 23, 274.
- CHNEIDER, E. & KESTEN, B. (1948). J. invest. Dermat. 10, 205.
- KITZ, P. F. D. (1949). J. invest. Dermat. 13, 199.
- KITZ, P. F. D. (1951). Arch. Derm. Syph. 64, 136.
- KITZ, P. F. D. & GOSMAN, J. S. (1952). Arch. Derm. Syph. 66, 180.
- KITZ, P. F. D. (1953a). Psychosom. Med. 15, 200.
- KITZ, P. F. D. (1953b). Ibid. 15, 405.
- QUEIRA, J. H. (1911). "Diseases of the Skin". Blakiston, Philadelphia.
- QUEIRA, J. H. INGRAM, J. T. & BRAIN, R. T. (1947). "Diseases of the Skin". J. A. Churchill Ltd. London.
- LAFFER, B. & BEERMAN, H. (1951). Arch. Derm. Syph. 64, 340.
- ALLEY, W. B. & NORVATH, P. N. (1950). J. invest. Dermat. 14, 9.

HORVON, H. J. ROOK, A. J.

& WILKINSON, D. S.

(1950). Brit. Med. J. 2, 1300.

IGEL, H.

(1948). Arch. Derm. Syph. 57, 204.

SILVERMAN, J. J. & POWELL, V. E.

(1944). Am. J. Med. Sc. 208, 297.

WEDDON, I. B.

(1949). Brit. med. J. 1, 472.

BOYE, P.

(1950). Acta dermat. venereol. 30, 137.

KOMNENSCHIEIN, R. R.

(1949). Proc. Soc. exp. Biol. 71, 654.

KOMNENSCHIEIN, R. R. KOBRIN, H. JANOWITZ, H. D.

& GROSSMAN, M. I.

(1951). J. Appl. Physiol. 3, 573.

ONTAG, L. W.

(1950). Arch. internat. Allergy & Appl.

Immunol. 1, 50.

STERN, F.

(1922). Z. Neurol. Psychiat. 78, 218.

STERNBERG, T. H. & BALDRIDGE, G. D.

(1948). J. invest. Dermat. 11, 401.

STERNBERG, T. H.

(1952). in OBERMAYER, M. E. et al. (1952).

Arch. Derm. Syph. 65, 291.

STERNBERG, T. H. & ZIMMERMAN, M. C.

(1952). Arch. Derm. Syph. 65, 392.

STOKES, J. H.

(1930). Arch. Derm. Syph. 22, 803.

STOKES, J. H. & PILLSBURY, D. M.

(1930). Arch. Derm. Syph. 22, 962.

STOKES, J. H.

(1932). J. Amer. med. Ass.

STOKES, J. H.

(1932b). Pennsylvania Med. J. 35, 229.

STOKES, J. H. & BEERMAN, H.

(1932). Arch. Derm. Syph. 26, 478.

STOKES, J. H.

(1935). J. Amer. med. Ass. 105, 1007.

STOKES, J. H. KULCHAR, G. V.

& PILLSBURY, D. M.

(1935). Arch. Derm. Syph. 31, 470.

STOKES, J. H. & STERNBERG, T. H.

(1939). Arch. Derm. Syph. 40, 345.

STOKES, J. H. BEERMAN, H.

& INGRAHAM, N. R.

(1939). Amer. J. med. Sc. 198, 577.

- STOKES, J. H. (1940). Arch. Derm. Syph. 42, 780.
- STOKES, J. H. & BERMAN, H. (1940). Psychosom. Med. 2, 438.
- SULZBERGER, M. B. & GOODMAN, J. (1936). Am. med. Ass. J. 106, 1000.
- SULZBERGER, R. M. B. & BAER, R. L. (1946). "Year Book of Dermatology & Syphilis".
Year Book Publishers, Chicago.
- SULZBERGER, R. M. B. & BAER, R. L. (1948). Ibid.
- SULZBERGER, R. M. B. & BAER, R. L. (1949). Ibid.
- SULZBERGER, R. M. B. & BAER, R. L. (1950). Ibid.
- SULZBERGER, R. M. B. & BAER, R. L. (1951). Ibid.
- SULZBERGER, R. M. B. & BAER, R. L. (1952). Ibid.
- SULZBERGER, M. B. & ZAIKENS, S.H. (1948). Med. Clin. N. Amer. 32, 669.
- TOWER, D. B. & McLEACHERN, D. (1949a). Canad. J. Res. E27, 105.
- TOWER, D. B. & McLEACHERN, D. (1949b). Ibid. E27, 120.
- URTICARIA. (1953). Occasional review. Lancet. 1, 290.
- VAN der VOLK, J. M. & GROEN, J. (1950). Psychosom. Med. 12, 303.
- VIDAL, E. (1886). Ann. Dermat. Syph. 7, 133.
- WADA, M. (1950). Science. 111, 376.
- WALSH, M. N. & KIERLAND, R. R. (1947). Proc. Staff Meetings. Mayo Clin. 22, 578.
- WATT, A. W. (1947). Brit. J. Dermat. 59, 13.
- WEISS, E. & ENGLISH, O. S. (1943). "Psychosomatic Medicine".
W. B. Saunders & Co. Philadelphia.
- WEISS, E. & ENGLISH, O. S. (1949). "Psychosomatic Medicine".
W. B. Saunders & Co. Philadelphia.
- WEISS, E. (1950). Arch. internat. Allergy & Appl. Immunol.
1, 4.
- WEITZNER, J. (1952). Arch. Neurol. Psychiat. 68, 831.
- WERTHER, J. (1929). Z. Fortbild. 26, 341.

HIMSTER, A.

(1950). cited by DOWLING, G. B. (1950).

Practitioner, 165, 378.

MITCHELL, G. P. B. & SHORE, S.

(1934). Lancet. 2, 11.

WILLIAMS, D. H.

(1938). J. invest. Dermat. 1, 119.

WILLIAMS, H. D.

(1951). Arch. Derm. Syph. 63, 545.

WINKLER, F.

(1911). Mh. Dermat. Bd. 52.

WITKOWER, E.

(1935). J. Ment. Sci. 81, 533.

WITKOWER, E. D.

(1946). Lancet. 1, 566.

WITKOWER, E. D.

(1947a). Brit. J. Dermat. 69, 281.

WITKOWER, E.

(1947b). Bull. Menninger Clin. 11, 148.

WITKOWER, E.

(1948). In "Modern Trends in Dermatology".

ed. MacKenna, R. M. B. Butterworth. London.

WITKOWER, E. & EDGELL, P. G.

(1951). Arch. Derm. Syph. 63, 207.

WITKOWER, E. D.

(1952). Urol. Cutan. Rev. 56, 94.

WITKOWER, E.

(1953). Psychosom. Med. 15, 116.

WITKOWER, E. & RUSSELL, B.

(1953). "Emotional Factors in Skin Disease".

Cassell & Co., Ltd., London.

WOLFF, H. G. & MITTLEMAN, B.

(1939). Psychosom. Med. 1, 273.

WOLFF, H. G. LORENZ, T. H.

& GRAHAM, D. T.

(1951). Trans. Ass. Amer. Phys. 64, 435.

WOODHEAD, B.

(1946). Arch. Dis. Childhood. 21, 98.

WRIGHT, S.

(1952). "Applied Physiology". Oxford University Press, London. 9th Edtn. p. 321.

WILLER, M.

(1944). Ann. Allergy. 2, 515.