

This thesis is a sustained, in respect
that it shows a certain amount of apparent
original & spontaneous thought on the subject
of gout as a neurosis, but I cannot
help indicating here that the author might
have made it, or may yet make it,
much better, by giving some effect to
the intentions of the Senate, as expressed
in the Calendar 1886-87 p. 129
as it stands, the essay is not worth
very much.

W. B.
Guth.

Its Neurotic Origin.

By

Robert M. G. Binnie, M.D., C.M.

"Gout is in short, an affection
of all the nerves." *

Aretaeus. on the causes
and symptoms of chronic diseases.
Book II Chap. XII.

* See p 4.

The motto really has no bearing
upon the argument. Aretaeus only
meant that gout was a disease
of the sinews & joints !!

ProQuest Number:27552835

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 27552835

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

12

The aspect of wide & intricate subjects, is apt to vary very considerably according to the point of view, from which those subjects are regarded.

They are like certain crystals, which vary in appearance according to the direction from which the light falls upon them. This fact has struck me most forcibly in my own experience in reference to the subject of Gout.

My first case of this affection, impressed me so strongly with the view that it is neurotic in its origin, that I was naturally led to regard my few succeeding cases from the same standpoint, and thus the remarks which follow have taken the form of special pleading for that theory. In the following remarks it will be noticed that there has been little or no reference to the facts so ably established by Garrod, with reference to the excess of uric acid in the blood. This reticence on the part of the writer, is due to the fact, that

these observations have been so well established, that it is impossible to controvert them, his object being merely to give prominence to the important part played by the nervous system in this disease.

My interest in the subject, was especially aroused, by a case which occurred in a gentleman, whose relation to me was more that of confidential friend than of patient. An intelligent friend, though a layman, has this privilege that besides, desiring the diagnosis, prognosis and treatment of the disease from which he suffers, he may also desire to be informed as to the most probable theory regarding its aetiology and pathology. And this is what happened in my own case. But if this privilege might entail in some cases some embarrassment on the part of the medical man, it had the advantage in this particular case of enabling me to make inquiries regarding the subjective aspect of the disease, which were of some influence

3

in enabling me to form an opinion of my own, as to the essential nature of gout. Sydenham himself, who for the greater part of his life, was a victim to gout, refers to the possible advantage, which the subjective aspect of the disease gave him in his researches. "Either men will think that the nature of gout is wholly mysterious, and incomprehensible, or that a man like myself, who has suffered from it thirty four years, must be of slow and sluggish disposition, not to have discovered something respecting the nature and treatment of a disease so peculiarly his own." (Treatise on Gout and Dropsy cap. i) On the case itself, as well as of some other cases which I have had, I do not intend to make any detailed account, as they exhibited no abnormal or peculiar features, which would in any way render them worthy of special comment. It may seem somewhat rash to base any views as to the pathology of gout, upon a few cases, but one is at any rate free from the temptation

of appealing triumphantly to the "brute force of figures," and is obliged to scan each individual phenomenon of the disease as thoroughly as possible, and give his reasons for his belief on their merits alone.

It is interesting, but possibly not very profitable to glance at the opinion held by the ancients as to the cause of gout. The advocates of the humoral pathology of gout, can refer to Hippocrates as one who held their views, for his idea was, that the retention of some humours in the blood is the cause of the disease.

Those who hold the neurotic theory of the disease might, on the other hand, refer with some complacence to the statement of Aretaeus, which I have placed at the head of the present Essay: "It is, in short, an affection of all the nerves."

But, unfortunately the slight solace which the name of Aretaeus gives, disappears on reading a little further on, where he says "The first affected are the nerves, which are the ligaments of the joints" By this latter passage he plainly indicates that,



 nerves, to
 Aretaeus, were
 not what they
 are to us!
 See below

he uses the word nerve, in the sense in which it was used by the Greeks; namely to mean a nerve or a ligament, a sense which may be traced in the occasional use of our English word "nervous", to represent 'forcible' e.g. 'He writes in 'good nervous English.' Sydenham's theory of Gout was generally regarded as purely humoralistic, until Dr. Ord showed that it was partly^a neurotic view, as well as a humoralistic one.

Thus he says (Gout Cap xvii) "The more closely I have thought upon gout, the more I have referred it to indigestion, or to the impaired concoction of matters, both in the parts and the juices of the body" This looks a purely humoral theory, but further on he goes on to say: "While these (i.e. active exercises in the open air) were kept up, the blood was invigorated, and the tone of the body firm and steady. When however, they were dropped, the animal spirits gave way; the frame lost tone & the assimilation became imperfect" If the order in which Sydenham has here placed the chain of events, be taken to represent

what he considered was the sequence of events in the relation of cause and effect, then it is at once seen, that his view was neurotic, and the deterioration of the blood was due to the fact that the animal spirits gave way, or as we should more express it, that the nervous influences, which govern the nutrition of the tissues, became modified.

Stahl however, seems to have been the first to propound explicitly a purely neurotic theory, and this view was taken up and ably expounded by Cullen, and more recently by Laycock, Living, Meldon, Ord and Duckworth.

In my own study of the cases which have come under my notice, the neuratic theory of its origin, presented itself so forcibly to my mind, and seemed to me so completely to account for, and correlate the various phenomena of the disease, that the remarks I have to make regarding its probable pathology will no doubt seem to take the form of special pleading for the view, that gout is essentially a tropho-neurosis.

The

The view that the nutritive processes of the body are under the direct control of the nervous system, is one which has been gaining ground fast, with both physiologists and pathologists. Some have gone further and hold that there exist in the spinal cord trophic centres, and have busied themselves in the search for such centres, just as they had searched for, and in many cases found the centres for respiration, vaso-motor action, micturition, defaecation, erection, parturition, perspiration and even thermotaxis. Most pathologists have however confined their attention to local diseases of nervous origin; such as Bedson's and cystitis in paralysis. Herpes-zoster, Ulceration of the cornea from paralysis of the fifth nerve: Brittle-bones, in disorder of the nervous system; Sympathetic Ophthalmia, glossy skin from nerve injury: Rapid atrophy and peculiar degeneration of muscles in certain diseases of the spinal cord; Disorganisation of the joints in Locomotor Ataxy, Inflammation of the joints after injury to the spinal cord,

in certain diseases of the cord. &c. &c.

The cases of general diseases of supposed nervous origin are not so numerous, but even here may be enumerated, Diabetes, and possibly all cases of fever.

We shall now review some of the characteristic features of gout and see how far they are explained by the theory that the disease has its primary seat in the nervous system. It must be borne in mind that the nervous changes may be either primary or secondary; and thus that the neurotic theory is not incompatible with, but may either be considered explanatory of the facts so ably made out by Dr. Garrod as to the direct relation of gout with an excess of Uric acid in the blood. The essential point in the neurotic theory seems to me to consist in the assertion that the nervous is the tissue of the body specially involved, but its advocates may differ inter se: as to whether the nervous changes are themselves the result of the deteriorated and overloaded blood, or

rather
seen

that the

whether it is the modification of the nervous functions which cause these blood changes. Evidently the latter hypothesis would be a more purely neurotic theory than the former; but the former also, is essentially neurotic rather than humoralistic. A purely humoralistic theory would regard the excess of Uric Acid as sufficiently explanatory of all the phenomena

The first characteristic feature which I shall take is however one regarding which there is some doubt. Dr. Spencer Wells drew attention to the fact that most gouty patients, possess a very highly developed nervous system, and this statement may be taken with an assertion made by Sydenham (Cap XV) that "Gout, unlike any any other disease, kills more rich men than poor; more wise men than simple. Great Kings, Emperors, generals, admirals & philosophers have all died of Gout." This statement that the intellectual are more subject to gout than others is disputed by most medical men at the present day.

But

But when we contrast the conditions of Society at the time of Sydenham, with its present state, we must admit that he had better opportunities of verifying or discrediting such an assertion, than we have. In Sydenham's ^(every man) day, lived and died in the Social class in which he was born, Generation succeeded generation at the same trade, at the same counter in the same profession.

Above these the Fundal Nobility lived apart in a world of their own. In the present day of Capitalism, industrial activity, political equality + competitive examinations, the lower classes are constantly worried by the wish for change: the rich are consumed with anxiety to acquire more wealth - general discontent prevails - all the classes of Society are in unstable equilibrium. There is considerable intermarriage between the families of the different classes, and the hereditary qualities of mind in the different families become more difficult to trace. Besides the general increase of wealth having brought the luxuries

within the reach of a larger number of individuals, the proportion of cases of the acquired variety of gout, must bear a larger proportion to those of hereditary gout than it did in the time of the "Father of English Medicine". Besides the assertion of the proclivity of the more intellectual to gout, Sydenham, in his treatise, constantly refers to his own personal experience of the effects of mental activity in bringing on an attack of Gout. Thus, in the preface, he says "By applying my mind to its utmost and by bringing all my powers of thought on the subject, I brought on a fit of gout, such as I had never before suffered from" and again "Whenever I returned to my studies the Gout returned to me."

The most characteristic feature of gout is its typically hereditary character.

This fact in itself gives to my mind a strong a priori probability of the nervous origin of the disease. Heredity is best explained when brought into the category of nervous phenomena.

Menuret

certain phenomena, morbid or normal recur in an individual, similar to those which affected an ancestor of his, the analagous mental state of memory at once suggests itself to us, and Hering, in his Essay on Memory, has given good reasons for the view that this suggestion is something more than a mere analogy.

In fact, whenever the environment makes a very deep impression upon an individual organism, that impression is apt to be repeated at a subsequent period, either in the individual himself, or in his progeny. When this repetition occurs in the individual himself and in the region of mental action the process is termed memory, but when it occurs in the progeny it is termed hereditary.

Whether this process of transmitted repetition takes place by means of vibration, it is not our province here to discuss, but at any rate, ^{it is} the nervous system, which alone is endowed with such peculiar functions.

Dr Benjamin Ward Richardson

in his *Diseases of Modern Life* (p. 27) divides the diseases which are implanted in the body antecedent to birth into two classes. In the first class the disease is developed in the body while still in the womb of the mother. In the other class to which gout evidently belongs, the disease, although it may pre-exist in the body previous to its birth, is not necessarily so far developed as to be recognizable at birth.

It is the latter diseases alone which warrant the term hereditary. In his inquiry as to the physical seat of these hereditary proclivities, he gives good reasons for supposing that this seat is the nervous system. It is true, that the humoralist view, that the blood is the seat of all the good and bad qualities of the body, has deeply impressed the popular mind, as is evinced by such terms as "ancestral blood" the disease runs in the blood" relatives by blood".

On this subject Dr. Richardson remarks "The phenomena of diseases that are truly hereditary are due, as it would seem from all modern research to primary

injury inflicted upon nervous matter.

It can now be proved from direct observation on the inferior animals, that certain injuries inflicted on the nervous system, will produce symptoms which pass to the offspring of the injured as distinctly as if the mischief had actually been inflicted upon the offspring. Thus Epilepsy, induced by nervous injury, has been transmitted directly downwards in hereditary course. (*Diseases of Modern Life* p 41).

Again, the special involvement of the joints affords to my mind a powerful argument in favour of the theory here advocated. Dr. Crichton in his article "Pathology" in the *Encyclopedia Britannica* lays special weight upon the importance of the articular nerves in Rheumatic Fever, but his remarks only make reference to the symptoms of pain in the joints, and not to the physical signs, - swelling &c. The swelling shews that the articular nerves are centrifugal, as well as cutipital in character, that they carry impulses regulating the
absorption

and transfusion of fluid into the joint as well as sensation of pain. He says. " In Rheumatic fever, the heart is liable to Myocarditis, as well as Endocarditis, and pericarditis, but for all other muscles the changes are in the tendons ligaments and synovial membranes only; or in fact, in these structures, by which the work of the muscles is applied. These structures have nerves, some of them large enough to be looked for in the dissecting room, although less is made of them in Physiology. The function of the nerves of the joints, is not sensory in the ordinary use of the term, but it may be said to be to convey to the centres the sense of effect of the work done by the muscles. When there is intense Metabolism of the muscular substance, but no work done, the same nerves, having no sense of effect to convey, convey an acute sense of pain." Again. " One set of muscles after another generate heat without work, so that one joint becomes painful after another.

Nelson compares the heart in its perpetual

to, and fro movement, with "one of the large joints"

Morphologically the joints are large lymphatic spaces containing fluid which, like the fluid contained in other lymphatic spaces: e.g. the peritoneal sac, - is in continual movement. Experiments upon the Frog, have shown that the transudation and absorption of fluid in the lymphatic spaces, are very largely under the control of the nervous system. It is thus, very probable, that in the joints where the amount of fluid which transudes and is absorbed, must vary considerably from time to time, according to the amount of movement to which the joint is subjected, ^{in the process} should be regulated by the action of the nervous system, and that this variation in the amount absorbed and transuded is not due to the mere mechanical action of churning to which the movement of the limb subjects the joint, is further shown by the numerous cases of joint affection, which occur when nervous influence is presumably in abeyance.

Thus in all kinds of fever the occurrence

of joint affection is commonly observed; and they may also occur as sequelae of the exanthemata when as we know the nervous system is in a very weak condition. In two of the exanthemata especially, namely, typhus and diphtheria we know that it is not unusual for metastatic joint inflammation to take place. And it is exactly in these two diseases, that the lowered tone of the nervous system is most marked. This is expressed in the case of Diphtheria by the paralytic affections, which are so often left behind in that disease, and in the case of typhus, by the great nervous prostration, which may in severe cases proceed to a nervous condition which derives its name (The typhoid State) from this disease.

But still stronger arguments for the special relation, which joints seem to bear to nervous influence, are furnished by the labours of Charcot, Ball, Meir Mitchell, Ord & Buzzard.

Thus Charcot has described an interesting

case where effusion of blood took place into the knee joint after traumatic hemisection of the spinal cord.

There are also numerous cases recorded where acute and subacute joint effusions have taken place in nervous affections. e.g. Hemiplegia of central origin: General Paralysis, and many of the "System diseases," of the cord.

The striking resemblance between Charcot's disease, termed "pied tabetique" ^{and cord?} may turn out to be something more than a mere superficial similarity, in fact to be a similarity of cause.

The arguments in favour of the nervous origin of the "pied tabetique" are very powerful indeed. This disease begins like gout with excruciating pains, the foot swells enormously and becomes oedematous. After the subsidence of the attack, the foot is left deformed, with the bones possibly ankylosed together. Subsequent attacks may follow at intervals and increase the deformity. If the disease begins in

other joints of the body the phenomena are essentially similar. Careful inquiry will reveal the fact in these cases, that the nervous system is profoundly affected, and there is no reason to doubt, that the relation between the affection of the nervous system and that of the joints, is one of cause & effect.

The symptoms which point to the nervous nature of the affection are the absence of the patellar-tendon reflex, the Argyll-Robertson ^{symptom} occasional diplopia, temporary attacks of paresis of the bladder; violent palpitation, and anaesthetic patches in various parts of the skin.

The phenomena which point to the neurotic nature of gout are, it is true, not so direct as these, but in the latter affection, we often find that those joints are often implicated alternately which correspond with one another on opposite sides of the body, and this points directly to some nervous connection of these joints with one another by means of the spinal cord.

The occurrence of albuminuria during the paroxysms of gout, and its absence in the intervals between the gouty attack is possibly a phenomenon of the same nature as the albuminuria which is so often associated with certain nervous diseases. e.g. uramic convulsions, coma or hemiplegia due to cerebral haemorrhage.

But the most interesting analogy is perhaps to be found in the fact that during epileptic attacks, there is very often a temporary albuminuria, even in the patients who afford no evidence whatever of any affection, either of the kidney or heart. In the section on the Therapeutics of Gout, we shall in discussing the action of Colchicum, have occasion to note the similarity of the action of that drug as a nervous sedative in gout, with the action of Bromide of Potassium in Epilepsy. And the very fact that the term "fits" has been applied both to attacks of gout & attacks of Epilepsy, shows that the periodic recurrence and paroxysmal character of both affections have strongly seized hold

of the popular mind.

The most plausible theory of epilepsy, attributes the fits, not to increase of nervous action, but to some lowered tension in certain motor areas, caused by depressing influences such as malnutrition from embolism or other causes.

Lastly the periodicity observed in food suggests to the mind, some action of the nervous system. Possibly this periodic action of the nervous system is merely a phase of that peculiarity which we have termed memory. At any rate we find that most instances of periodicity of the vital functions to be found, are cases where nervous influence is predominant.

Thus we have the rhythm of the cardiac and respiratory centres in the medulla oblongata, and the rhythm of the brain as a whole, which expresses itself as the alternation of sleeping and waking.

Dr. Michael Foster in his Text book of Physiology thus puts it. "Prominent among all other cyclical events is the fact that most animals possessing a well developed nervous system, must,

" night after night, lay them down to
 " sleep. The salient feature of sleep is
 " the cessation of the automatic activity
 " of the brain; it is the diastole of the
 " cerebral beat. But the condition is not
 " confined to the cerebral hemispheres, all
 " parts of the body either directly or in-
 " directly, take share in it."

Therapeutics Part II.

The views which a medical practi-
 -tioner holds as to the nature of the disease
 with which he deals, must to a very large
 extent influence his methods of treat-
 -ment. And conversely the favourable
 results or otherwise of his treatment, must
 go far to confirm or discredit the working
 hypothesis which led him to adopt his
 mode of treatment. Holding as I do
 the neurotic theory of Gout, it was natural
 that in the treatment of my case, I
 should have resorted to nervous tonics.

But the tonicity of the nervous system
 is largely dependant upon the quality
 of the blood supplied to it, and this
 again may depend upon the rapidity
 of the circulation or upon a healthy
 condition

of the alimentary system, and hence not only are the especially nervous tonics of use here; - but also all tonics whatsoever: Blood tonics; Vascular and Gastric tonics. Further a tonic state of that portion of the nervous system in which the mental faculties reside, is considerably influenced by all moral influences which can be brought to bear upon it, and until the patient fully recognizes his moral obligation, to completely revise all his habits ^[and mode] of living, no treatment can be either preventative or curative. He must recognize the fact that the action of drugs is of quite secondary importance as compared with this. Sydenham has some such consideration as this in his mind when he says "Then there are the bad effects upon the mind. This is warped from its right direction by Wine-drinking". (Cap XLVII). And again "As to venery a gouty man, who is an old man as well, acts just as foolishly in indulging in fornication as a traveller would act who, at the beginning of a long journey

"should consume all his viaticum, at
 "starting." And again. "Over and above
 "the damage which he brings on himself,
 "by neglecting to check the non-languid
 "desires of maning life, he denies him-
 "self the privilege of enjoying that jubilee
 "which by the special and kind gift of
 "nature is conceded to old men, of whom
 "it is the natural and happy lot to be
 "emancipated from the control of those
 "lusts, which during youth attacked them"

Partly on the basis of the above
 considerations; partly from observation
 made upon those cases of gout which
 have come under my notice, I have
 ventured to draw a scheme of the
 Therapeutics^{of Gout} I should recommend,

I Prophylactic Treatment.

This, of course, is only applicable
 to those cases which we suspect, from their
 habits, family history or premonitory
 symptoms, will sooner or later exhibit
 symptoms of gout, unless something be
 done. It is here specially that the moral
 treatment is of service. When the nervous
 system is in proper tone the lines of
 resistance

into which its various parts are mapped out, as physiologists have taught us, are well developed, so that the organism does not at once respond to impressions made upon it. Thus a man with his organization in a healthy condition does not give a start when any sudden noise is made in his neighbourhood, but a child or a delicate woman might. In the case of the child the lines of resistance have not yet developed; but in the case of the woman the loss of her physical health has entailed loss of nerve-tonicity or nerve-resistance. In the same way in a man with complete self control and good moral tone, the sensual feelings are not so easily roused, and the sight of an appetizing dish, or the prospect of a "good time" with jovial companions does not so easily overcome any resolutions which he may for some reason or other, have made to eschew high living or hard drinking. In men with less moral tone this may be a
much

more difficult or even impossible task and a considerable element in the prognosis of the case will thus be afforded by the moral sense of the patient. A complete revision of the patient's mode of living with regard to drink and diet, ^{must be made,} attention must be paid to such general tonics as fresh air, moderate out-door exercise; cold or tepid bathing every morning, or perhaps change of climate. It is probable also that the good effect of Mineral Waters, both in this country and on the continent, e.g. Bath, Harrogate, Leamington, Strathpeffer Moffat, Carlsbad, Vichy, Hamburg Aachen, Aix-la-Bains &c is due rather to the regular living enforced at these places, and to the pleasant society, fresh air and freedom from business anxiety and worry; in fact to a general tonic effect, rather than to any chemical action which the constituents of the water may have upon the tissues or blood of the patient.

II Treatment of Acute Gout.

It is from the action of
Colchicum

in the treatment of acute gout that one of the most cogent arguments for the Neurotic theory is adduced. The great discrepancies between the statements made by different observers, as to the action of this drug, are probably due to differences in the quality of the specimens which have been used. The action of Colchicum seems to vary considerably, according to the part of the country in which it has been collected, as well as according to the season of the year in which it was got. Botany furnishes us with numerous examples of the differences in quality of principles in the same species of plant collected, at different places, and we know also that the principles present in the juice of plants at one time of the year, may have disappeared, if a month or more has been allowed to elapse before the plants are collected. Sydenham was familiar with this fact, for we find that after writing a prescription containing an enormous number of Roots, Leaves, Flowers and Berries from various

various

plants, he gives the following directions
 "Collect the herbs, flowers and roots at
the season most favourable for their
respective virtues." (Treatise on Gout
 Cap xxxi).

In the case of colchicum the state-
 -ments formerly made as to its action
 in augmenting the uric acid
 coupled with the fact of its favourable
 action on acute gout was quite inappli-
 -cable on the uric acid theory and
 indeed quite opposed to that theory.

But it is probable that the statement
 is erroneous, indeed the opposite has
 been stated, viz: that the uric acid,
 and probably also the uric is reduced
 in quantity: at any rate the most
 marked action of the drug is now ad-
 -mitted to be upon the central nervous
 system. Thus large doses produce loss
 of sensibility and consciousness, and
 diminution of reflex excitability;
 phenomenon which indicate depression
 of the spinal cord and convulsions.

It also paralyzes the peripheral
 sensory nerves, while the motor nerves
 are

not affected by it. The activity of the respiratory centre is lowered, and this in its turn causes weakening of the heart and intermittence of the pulse.

The action of Colchicum in relieving the acute paroxysm of gout, thus becomes explicable on the Neurotic theory.

The paroxysmal character of the pain in gout, as well as its periodic recurrence, reminds us of such a nervous disease as Epilepsy, the difference probably being that whereas in the case of the latter there is some "Nerve Storm" somewhere among the motor regions of the nervous system; in the former a similar "Nerve Storm" occurs in the sensory regions. And just as Bromide of Potassium seems to owe its efficacy in Epilepsy to its depressing action on the motor tracts; so we may explain the action of Colchicum as due to a similar depressing effect upon the sensory tract. Thus if the Neurotic theory be adopted the action of Colchicum is brought out of the region of empirical, into the region of

rational therapeutics.

III Chronic Gout

In the therapeutics of Chronic Gout we have no remarks to offer upon any point bearing upon the relation of the disease to the nervous system. We shall content ourselves therefore, with a few remarks upon the urgency of strict temperance in diet, and total abstinence from alcoholic liquors.

Here the question is by no means the same as the similar question so dear to the popular debating societies: namely "The Total Abstinence Question"

In discussing the question of Stimulants we must remember that there are many other considerations to be kept in view, besides the mere health aspect of the question. Thus though it might be admitted that strict abstinence from alcoholic liquors and ascetic moderation in diet are more conducive to longevity, than even moderate indulgence, the question might still be asked, is the mere gain of a few years of life to be considered equivalent

to the greater enjoyment of a life of, rather less duration? Is not the cause of all man's activity the search for greater enjoyment from life? The mere necessities of existence do not count for much. A medical practitioner in an obscure village is just as certain of his daily bread, as the renowned professor in the Metropolis. We strive not for what keeps us alive, but for what makes life worth living. This view of the subject is often obscured in popular debates on total abstinence, in which the question is often made to hinge on such points as whether alcohol is a food or not. Even although it were proved that alcohol, however small in quantity is deleterious to the health, many a man is willing that his health should suffer the slight alleged deterioration, if that is to be at the gain of an increased enjoyment of life. A writer in the nineteenth century for December 1885 in an article on Narcotics and Stimulants says:

"How do we regard the South
Americans

" Indian chewing his cocoa leaf, or small-
 " iving his infusion of thorn apple? Is
 " his action legitimate in our eyes, or de-
 " based, degraded, unworthy of man?
 " Surely charity must be a large ingred-
 " -ient in any judgment that we form:
 " at least, those of us, whom acquaint-
 " -ance with human misery has made
 " kinder of human happiness. For what
 " is the picture? The downtrodden savage,
 " snatched by this drug from a world in which
 " he is oppressed, to commune in dreams with
 " the spirits of his fathers! Is that so dark
 " a superstition? Truly, in these enlight-
 " -ened days, but little is made of the
 " divination. She withers and dies in
 " the glare of Modern Reason; nevertheless
 " her extinction is no real progress. In the
 " revelation of the scientist there may be
 " truth; but there is truth in the dream of
 " the Indian, the truth of which philanthropists
 " and legislator have need to take account"

In determining whether total ab-
 -stinence or mere temperance is the more
 preferable in gout; Some such
 consideration

as the above should be kept in mind;
but here the total abstinence argument
has probably the greater weight, for the
penalty is more than mere deterioration
of health - it is the entailment of such
a measure of pain as to make life
barely tolerable.