ProQuest Number: 13906910

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 13906910

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

Thesis

Thesis for degree of M.D. presented by John Sandilands M.A. M.B. C.M. (graduated 1888). Subject:—

Medical Work among the villages of the Central Provinces, India

In the following thesis I shall attempt to describe very briefly the general outlines of my work and then more in detail I shall refer to a few special cases & diseases which seem to deserve a more thorough explanation.

The town of Bhandara which is my headquarters is a place of some 13,000 inhabitants & is situated about 40 miles East of Nagpur, the capital of the Central Provinces. Here during the monsoon & during those other months when touring in the district is impossible I have dispensary, a little hospital & a leper Asylum. In the district of Bhandara there are about 750,000 of inhabitants & for four or five months during the year I itinerate in the villages distributing medicines & doing such surgical work as is possible under these circumstances. For the sake of convenience in carriage I make up the medicines mostly in the form of pills & powders. These have this other advantage that among people who are many of them anything but intelligent we are better able to make them understand about doses than if we had fluid mixtures to dispense.

In the touring season of 1892-93 which lasted 5½ months 4489 cases were treated. The following is an analysis

Disease of	Medical	Surgical
Constitution, including fever	547	
Circulation		
Alimentary canal, liver spleen &c.	564	1
Respiration	326	
Genito Urinary System	85	13
~~Eye~~ Nervous System	105	2
Ear		236
Nose, mouth throat	7	30
Skin	2119	113
Bones & Joints	440	10
Tumours		3
Eye	73	85
	4296	493

In this list the one thing which is most noticeable is the enormous preponderance of skin disease over every other form. Scabies & ringworm are very common, every other individual almost seems tobe afflicted with one or other or sometimes both of these diseases. The practice which I follow is togive for ringworm Hyd. Iodi. Rub gr VI in ℥i of glue: & for Scabies the ordinary sulphur treatment. These remedies when properly applied as a rule are efficacious. But it is very difficult to know that the people give the remedies fair play. Cases of such a comparatively trivial nature cannot be followed up & even those with serious diseases are with difficulty prevailed on to travel with us & get proper treatment. Of course on tour cases requiring absolute rest cannot be attempted; but it is wonderful how much can be done even in cases where rest is necessary. Cataract cases, even, can be taken about from one camping ground to another & I cannot say I have ever seen harm resulting which I could undoubtedly attribute to the transit. If the cases are such as cannot walk & cannot be driven in a cart, they are taken either on a stretcher or on a dooli made up for the occasion. I have little hesitation in operating on tour for in the majority of cases it means the only chance the poor people have of getting better.

Having said so much about my work in general I now refer to a few special cases & diseases.

Case of Lupus Exedens

Bhiwie, Mahar, Borgaon: woman aet 50-60. For two years she had suffered & had applied many native remedies without effect. The disease began on the right ala of the nose & gradually spread upwards & downwards. When first seen the rt. nasal cavity was laid bare by ulceration. The rough raised tubercular irregular edges of the ulcer extending from the right angle of the mouth to the middle line as a base: & upwards in a line to within ⅓ of an inch of the inner canthus of the right eye. The half of the nose was ulcerated away & the rough edge was along the ridge of the nose. The ulcer had occasionally bled & an offensive sanguinary purulent discharge was oozing from it. The woman was very weak.

On 2.3.93 the woman was put under chloroform but did not go under readily & as the heart was very weak & slow chloroform was administered with great care & diffidence. Moreover, the breathing sometimes stopped. It was necessary to give the anaesthetic at intervals & in the intervals the operation was carried on. The first incision was made in the upper lip at the raphe when the coronary artery was cut & Spencer Wells' forceps applied. Then at the right angle of the mouth another incision was made cutting again the coronary which was secured in the same way as before. These two incisions were then continued up till they met at the inner canthus of the right eye. The part included was all taken away removing in this way all the disease so far as it could be seen. The remaining part of the upper lip and also the cheek external to the outer incision were freed a little from their mucous attachments & the two incisions were then brought together & secured by 3 thick wire sutures. In the intervals between these sutures others of thin wire were placed. An aperture was left for the nostril into which a drainage tube was put & the wound was dressed with [illegible] tissue & lint soaked in perchloride solution.

She was fed on milk & the wound was dressed daily. She made an uninterrupted recovery & on the 19th the stitches & the drainage tube were taken out. On the 22nd she was dismissed with a good artificial nose & the face looking very well. She was told to report herself in a year.

Cataract

Cataract is not very common in this district & though I have not kept any full record of my cases I think I may have operated in about 12 or 16. The

operation which I have performed & which has given fair results is a modification of that of Hecker. The incision is made a little within the sclero corneal line of junction & the knife (Von Graefe's) is entered so that, when the counter puncture is made in a similar point on the opposite side, the knife lies along the centre of the pupil. From this an incision is made downwards with a sawing motion till the knife is brought out so that the flap lies just within the sclero-corneal line of junction. An iridectomy is then performed & then with cystitome & curette the lens is extracted, gentle pressure by the fingers on the upper eyelid being as a rule necessary. In the first part of the operation while the flap is being made fixation forceps & a stop spring speculum are used but during the iridectomy these are dispensed with. As preparation the eye is well washed with a weak solution of perchloride of mercury & a few drops of a 2% solution of cocaine is used. As an example the following case may be noted: -

Lucchi, a woman about 60 years old, had had cataract in both eyes beginning about 5 years ago. For 3 years previous she had been unable to do any work. On Wednesday the 30th Nov. /92 she was brought to my camp & on the afternoon of the same day I operated on the left eye. The method adopted was that stated above. The eye was first washed with a solution of perchloride of mercury 1 in 4000. & then cocaine was applied. After the extraction of the bulk of the lens according to the steps noted above it was found that soft matter still remained in the anterior chamber. This was all removed by means of a spoon. After the operation the woman was able to distinguish fingers & count them. After free washing with perchloride solution dressings were applied, boracic lint dipped in perchloride solution & dry sublimated cotton & a bandage over all. On Friday & Saturday, Monday & Tuesday fresh dressings were applied; & on Wednesday, just a week after operation she was dismissed the corneal wound having healed & the iris being in good condition. She could readily distinguish objects. One of her sons she could recognise but the other younger one who had grown up in the interval after the cataract had set in she could not recognise. Another thing in this case worthy of note is that on Saturday 3 days after the operation I shifted camp to a place 12 miles off & then again on Tuesday to a place 10 miles distant. The woman was carried on a stretcher during these changes & was apparently none the worse for it. As to food for the first few days a purely milk diet is prescribed but often it is very difficult to get them to obey.

Case of Compound fracture & gangrene

On 28-10-90 Geiri, a girl 8 years old, was brought into my Bhandara dispensary with the history that 12 days previously she had fallen & broken her right arm. When she was brought both radius & ulna were seen, the broken ends of the bones protruding & all the flesh around in a soft gangrenous state. She was put under chloroform & the arm amputated mid way in the humerus. She bore it well & made an uninterrupted recovery which was very remarkable considering the condition the arm was in when she was brought. The girl has been seen twice since & the arm looks very well.

Epithelioma of penis

Two cases of this have been operated on. The first case was operated on in June /91. The man was put under chloroform & the penis amputated below the seat of the disease. A little difficulty was afterwards experienced in connection with the urine which was retained. The urethra had not at first been laid hold of after the operation & the granulations gradually obliterated the external opening till great difficulty was experienced on micturition. Consequently he was again put under chloroform & the urethra opened into from below & a catheter inserted. He recovered from the original disease but secondary growths in both groins increased & afterwards, I believe, caused his death.

The second case was not so advanced when first seen. In Nov^r /92 he came to me in great pain with the statement that the disease had begun 4 months before & had gradually been increasing ever since. The growth was of a fungating cancharacter & so far was almost, if not entirely, confined to the foreskin. The inguinal glands were not apparently involved. He was put under chloroform & the diseased part removed & recovery was without mishap.

Hydrophobia

This is a disease which is not uncommon in India & many die of it. I have had two cases of it & the curara treatment which I tried seems to be of little or no use. In the first case the ~~co~~ woman had been ill for a day or two

before I knew of the case & I saw her first 2 or 3 hours before death. Hypodermic injection of curara was tried but seemed to do little good. This case was peculiar in the fact that about 18 months had elapsed since she had been bitten by the rabid dog of whose bite at the time about 20 persons are known to have died. It would seem as if there were no limit to the time at which the disease may start once the virus has entered the system.

The second case I had under observation & treatment during practically the whole course of the disease, once it began to manifest itself outwardly.

On May 11th /93 at 6 a.m. a boy aged 10 was brought to my hut said to be suffering from the bite of a dog. There were several wounds on the body & on the arm but these were healed over. He had been bitten about 6 weeks before & two persons, a boy & a girl, who had been bitten by the same dog had since died. This boy took ill on the evening of the 10th & was brought to me on the morning of the 11th. Respiratory spasm on attempting to drink water was distinctly present. He felt sleepy & had also fever & wanted to be left undisturbed. Otherwise he seemed to be well & unless water had been offered him & he had attempted to drink it I would not have been certain that there was anything the matter with him beyond a little fever. His respiration, however, was distinctly irregular - difficult to count. The following is the treatment & the course of the disease during the 11th

Hour	Pulse	Temp:	Respirat:	Remarks & Treatment
7-45 am	134	107	36	Pilocarpine ⅛ gr hypodermically
8·30	112		36	skin moist
9-15	120	101	26	Skin wet: no salivation
10-0	110	101·4	28	do do ½ gr curara
11-15	120	102·2	26	skin wet
12-0				skin dry: enema of soap & water followed by motion
~~1-15 pm~~				℥viii milk & ℥iii stimulating mixture by rectum; ½ gr curara. Convulsions now general.
1-30	107	101·8	34	skin dry Pilocarpin ½ gr
3-0	130	103·4	39	skin dry
4·0				do ; salivation: Curara ½ gr; milk & stimulating mix as before
4·30				Convulsions growing worse ; curara ⅙ gr
6·30				do do
8·0 pm				died

After 6·30 pm. treatment was stopped. Nothing seemed to do him any good. The curara had apparently no effect whatever on the course of the disease & just caused.

him a little sickness which made him worse. $\frac{7}{12}$ gr in all was given of it. Twice pilocarpin was given & the first time it seemed to act well but still had no soothing effect on the disease & even did not bring down the temperature. At 3 in the afternoon he ceased to recognise those about him. At 8 pm. he died just 24 hours after his friends became conscious he was suffering from the effects of the bite. In the morning before the convulsions came on I thought of performing a laryngo-tracheotomy but had no tube beside me ~~the~~ & I dare say it would have been of little or no use.

Scorpion Sting

This is a misfortune which falls upon natives of India very often especially in the rains. The pain which ensues is often excruciating, rendering the sufferer quite incapable of doing anything ~~in~~ until relief is found. If not checked by suitable treatment it will last for hours & sometimes even for a day or two. Just as in serpent bites, so in scorpion stings, there are great varieties in the effects. These depend both on the scorpion & on the person stung. Scorpions vary both in size & kind & the sting from a large black scorpion is a much more serious affair than that of a small yellow or brown one. The condition of the individual stung is also an element to be considered for in the old & weak or in the young & helpless scorpion sting is a more serious affair than in the healthy & robust. Scorpion sting is not without its danger. I have known a young girl 8 or 10 years of age die within 24 hours of being stung by a scorpion & that too not a large one but comparatively speaking small. I shall give notes of a case of scorpion poisoning in which only with difficulty the man recovered.

As to treatment by far the best I have tried is the hypodermic injection of cocain hydrochlorate in doses of ¼ gr or ½ gr. I generally give ¼ gr first & repeat it if the result has not been satisfactory. All other kinds of treatment, ammonia &c have seemed to me to be useless; but cocain acts often like a charm, the sufferer almost in a moment changing from tears to smiles. It seems to be a kind of antidote, a specific against the ~~poi~~ poison: not merely acting in the way of numbing the ~~pain~~ nerves & rendering them incapable of giving pain. For, if some hours elapse & if the poison has in consequence well permeated the part & reached & infiltrated the lymphatic glands cocain then has little effect.

The following case however shows that it is not altogether infallible. One morning a man came to my bungalow in great distress from the sting of a scorpion in his toe. I injected hypodermically $\frac{3}{8}$ gr of cocaine & the pain was immediately relieved. In 10 minutes, however, when I again saw him he was decidedly worse & exhibited symptoms which were alarming. The pain in the leg was severe, saliva was flowing from his mouth, a cold sweat covered his body. Nausea & vomiting ensued, the breathing was very rapid, shallow & laboured & the pulse was almost imperceptible. I counted 40 in a minute but it was so weak, flickering & irregular that it was with difficulty counted. The two things he complained of were the pain in the leg & the breathing. Afterwards there was a little giddiness, but no deafness, loss of memory, confusion of ideas, headache delirium or rise in temperature. The breathing was so bad that for a little artificial respiration was tried & 20 m liq atropia were given. For the heart brandy in ℥ss doses every ¼ hr was administered but as this seemed to have little effect first one then another mustard poultice was placed over the cardiac region. This treatment brought the heart back in something like 2 hours from the beginning of the attack. But for 10 hours afterwards the pain remained in the foot & there were present also alternations of hot & cold sensations with rigors. Next morning the man was well & able to go about. The scorpion in this case was said to be 5 or 6 inches long & this may account for the severity of the symptoms. There is, of course, just the other explanation that owing to some idiosyncrasy on the part of the man it was a case of cocaine poisoning. The amount of cocaine administered was not so much as I often give & there are some of the symptoms which do not coincide with other recorded cases of cocaine poisoning. The giddiness, the pulse, & the respiration might point to the cocaine; but on the other hand the following symptoms are like those of snake poisoning cases:- vomiting, respiration, saliva, cold sweats, muscular twitchings, rigors, & subnormal temperature. There was an absence of numbness, confusion of ideas, & want of sensation as probably would have been present in cocaine poisoning. & instead of the saliva & perspiration being less & the temperature raised they were the opposite. There was no apparent paralysis of nerve centres or restlessness or dazedness about the man.

Leprosy

This is a disease which is not very common in the villages of this part of the country but we are always seeing some one here & there afflicted with it.

The recent Commission has brought this disease prominently before the profession & the public at the present time. The results of that Commission in some respects are very surprising, notably in regard to the contagiousness & the heredity of the disease. Only a very small per cent of cases, I think about 5%, are put down to contagion & heredity. This so far as my experience goes seems a very small percentage indeed & possibly the following may be the explanation. If I mistake not the enquiries of the Commissioners were chiefly if not entirely undertaken in Leper Asylums. Here is where a fallacy may come in in making an enquiry about heredity & contagion. Lepers separated from their natural home surroundings are not always ready to give a true answer about relations that may be or may have been affected with the disease. My experience goes to prove that just as at home there is an unwillingness to admit any tubercular taint in a family so in India lepers are averse to telling all they know about leprosy in their family. But when a leper is met in his own village among the people who have known him & his family all along he can scarcely hide the family history: & indeed often when he is asked if he does not reply quickly the bystanding villagers reply for him. This then may explain to some extent how it is that Contagion & Heredity count for so little in the Commissioner's report.

Leprosy seems to be in this district a disease of the poorer people. In this my experience coincides with that of others who have investigated the matter. Insanitary surroundings seem to ~~pred~~ predispose to the contraction of the disease.

The treatment of leprosy is admittedly very unsatisfactory so far as the eradication of the disease is concerned: but much can undoubtedly be done for the relief of their symptoms. I have especially found that their wounds can very readily be healed by ordinary antiseptic precautions & by the application of a lotion of Ferrum Tartaratum 30 grs in ℥1 of water.

The treatment of the disease itself is a much more difficult matter but I will mention what the results have been in my hands. I have tried three different methods of treatment in 3 cases which I have had under observation now for a number of months.

Case I Saiki, a woman about 35, has had the disease for about 3 years. Three years before she contracted the disease her father died of it having been affected for 5 or 6 years previous to his death. This might point to contagion as being the cause of the daughter contracting the disease as she has 3 sisters & 4 brothers & they are said to be

healthy. She has always had plenty of salt & there is no history of syphilis.

The face is decidedly tubercular in the ears, forehead, nose, chin, lips & cheeks & if anything the tubercles here are developing. There is no anaesthesia about the face. The skin of the arms behind is loose, glazed & wrinkled, a condition which seems to precede the formation of tubercles. In the lower limbs the disease has made more progress. In both thighs there are tubercles present in the skin & in the lower legs the skin is glazed & smooth; here also anaesthesia is present.

She has been treated with a tonic of arsenic, nux vomica & reduced iron & as an embrocation Lin ammon has been given but the disease does not seem to be stationary but rather progressing. It is noteworthy, however, that she feels better & thinks she is the better of the treatment & she has gained in weight 2½ lbs during the last two months.

Case II

Pandu aet 30. Has been affected for 10 years with the disease. No history of heredity can be made out & none of ~~the~~ his family seem to be affected with the disease. He was fairly well to do, not a great fish eater, has had salt in abundance & there is no history of syphilis

Tubercles are only slightly present on the face & there is no anaesthesia here: indeed the only part of the body where there is anaesthesia is over the extensor surface of toes & the dorsum of both feet. The skin of the arms behind & of the lumbar region of the back & of the thighs is soft, loose, glazed & wrinkled. The fingers & toes are swollen. Such is his condition at present: but when examined a few months ago there were tubercles present on the epigastrium, below the right & left nipples, in the lumbar region behind & in the skin of both thighs. These tubercles have disappeared & he is decidedly in a better condition than before & he thinks so himself. He has gained 1½ lb in the last two months. The treatment ~~ap~~ adopted in his case has been that of chaulmoogra oil internally; & externally, the same oil in emulsion with Aq Calcis. It seems to have had a good effect in this case.

Case III

Gusia aet about 35. In this case there is a history of his mother's brother being affected with the disease so that perhaps heredity may have something to do with his contracting it.

Tubercles are present in the ears, forehead, nose & chin but there is no anaesthesia in the face, indeed so far as my experience goes anaesthesia is a rare thing in the face. It generally is present first of all at any rate in the hands & feet. It is so in this case. Anaesthesia is present in the hands on the palmar surface & dorsal surface and on the dorsum of the feet but not the soles. In the right arm a few tubercles are present over the radius, low down; but there are no tubercles on the left arm. There is considerable loss of tissue by absorption in all the fingers & the stumps that are left are bent & out of shape. Ulcers also are present on the hands. The body presents no signs of the disease but in the lower legs the skin in front is glazed & loose and there is some loss of tissue in some of the toes.

The treatment adopted in this case has been Unna's; Ichthyol pills have been given 3 times a day & a liniment of Resorcin has been used externally. He does not show much of improvement; rather, I think, the disease is progressing. He himself thinks he is better than before & he has gained in weight 2 lbs in the last 2 months.

It cannot be said that I have seen anything brilliant in the treatment of Leprosy; but it is always a little if pressing symptoms can be relieved & if the progress of the disease can in some cases be checked. And this, I think, I have been able to do.