Thesis

Thesis for degree of B.B. presented by John Sandelands
B.B. M.B. Calcutta (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 and 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, it is situated about 40 miles East of Bhopal, the capital of the Central Provinces. Then during the monsoon & during three other months when farming in the district is impossible, I have dispensary, a little hospital & a leper asylum.

In the district of Bhandara there are about 750,000 inhabitants, for four or five months during the year I traverse in the villages distributing medicines & doing such surgical work as is possible under these circumstances. In the case of communities in carriages 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 took fluid mixtures to dispense.

In the touring seasons of 1892-93 which lasted 5½ months 4759 cases were treated. The following is an analysis...
<table>
<thead>
<tr>
<th>Disease of</th>
<th>Medical</th>
<th>Surgical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constitution, including skin</td>
<td>547</td>
<td>1</td>
</tr>
<tr>
<td>Circulation</td>
<td>564</td>
<td>13</td>
</tr>
<tr>
<td>Elementary Canal, ears, throat</td>
<td>326</td>
<td>2</td>
</tr>
<tr>
<td>Respiration</td>
<td>85</td>
<td>236</td>
</tr>
<tr>
<td>Genito Urinary System</td>
<td>105</td>
<td>30</td>
</tr>
<tr>
<td>Eye</td>
<td>73</td>
<td>85</td>
</tr>
<tr>
<td>Ear</td>
<td>14296</td>
<td></td>
</tr>
<tr>
<td>Nose, Mouth, Throat</td>
<td></td>
<td>493</td>
</tr>
<tr>
<td>Skin</td>
<td>440</td>
<td></td>
</tr>
<tr>
<td>Bones &amp; Joints</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joints</td>
<td></td>
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</tr>
</tbody>
</table>

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 to be afflicted with one or other or sometimes both of these diseases. The treatment which I follow is borac for ringworm, boric acid for scabies. The ordinary sulphuric treatment, these remedies when properly applied as a rule are excellent. 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 then some diseases are with difficulty pursued on to their proper treatment. Of course in some cases requiring absolute rest cannot be attempted; but it is wonderful how much can be done even in cases where rest is necessary. Balanced cases, even, can be taken about from one camping ground to another & I cannot say I have ever seen burnout which I could undoubtedly attribute to this transplant. If the cases are such as cannot walk, I cannot be drawn in a cart. They are taken either on a stretcher or in a couch made up for the occasion. There little deviation in operating on tours 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 some special cases, & diseases.
Case of Lupus Eczema

Disease, nature, duration: Woman, 30-60. In two years she had suffered from an ulcer. Many roentgen rays were ineffective. The lesion began on the right side of the nose and gradually spread upwards and downwards. When first seen, the lesion was a large, round, bright, ulcerative area, irregular in shape, extending from the right angle of the mouth to the middle line as a base: upwards it was about 3 cm wide of the upper canthus of the right eye. The lesion was of medium size, and occasionally bleed. An offensive, yellow-green purulent discharge was coming from it. The woman was very weak.

On 23-93 the woman was first under chloroform, but did not go under readily. As the chloroform was not sufficient, ether was added. However, the breaking down did not stop. Surgery began. The lesion was excised and the opening was closed. The first incision was made in the upper lip at the cheek, then the incision was cut through the base, thus opening the lesion which was excised in the same way as before. These two incisions were then continued up till the point at the upper canthus of the right eye. The part included was all taken away. Recovery was very good, as far as it could be seen.

The remaining part of the upper lip and also the cheek were excised. The ulcer in the mouth was found to be a little from the mucous attachment, and these two incisions were then brought together and secured by 2 silk thread sutures. The intervals between these sutures, others of the skin were closed. An aperture was left for the nostril with which a drainage tube was put. As the wound was closed with silver nitrate and kept soaked in penicillin solution.

She was fed on milk. The wound was drained daily. She made an uninterrupted recovery. On the 19th the stitches and drainage tube were taken out. On the 21st she was dismissed. A perfect artificial nose then, the woman looking very well. She was told to report herself six months.

Balanced

Balanced 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.
operation which above performed & which has given fair results is a modi-
fication of that of Keeler. The incision is made a little within the sclera,
conical base of junction to the knife (see Keeler's) is adhered to that, then the
scleral junction is made in a similar point on the opposite side, the knife lies
along the edge of the pupil. From this an incision is made down wards with a
slightly curved line to the knife is brought out so that the flap lies just within the
scleral conical base of junction. The incision is then performed & then with coph-
stone & sutures the lens is extracled, gentle pressure by the figures onto upper
eyeball being as a rule necessary. In the first part of the operation while the flap
is being made fixation proper to a stop spring speculum is used but during the
winderly time an dispensable with. In preparing the eye is well washed with
a small solution of phenoliodide of mercury & a few drops of a 2% solution of
Cocaine is used. As an example the following case may be noted:

Sara, a woman about 60 years old, had had cataract in both eyes begin-
ning about 5 years ago. In despair previous she had been unable to stay
work. On Monday the 1st. 1892 she was brought to my camp from the after-
noon 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 40,000 & then cocaine was applied. After the extraction of the bulla of the lens
according to the steps noticed above I was found that soft matter still remained
in anterior chamber. This was all removed by means of a syringe. After the
operation the woman was able to distinguish fingers & count. After five
weeks washing with perchloride solution dressing worn & applied, boracic lint dipped in
perchloride solution & dry saturated cotton & a bandage worn all. On Friday
Saturday, Monday & Monday fresh dressing worn applied ; on Wednesday, four
weeks after operation she was dismissed. The anterior chamber was healed & the
iris being unjured condition. She could readily distinguish fingers. One of her
patients she could recognize but the other strangers one who had grown up in the
interval after the cataract had set in she could not recognize. Another thing
which case worthy of note is that on Saturday 3 days after the operation I
shifted camp three places 12 miles off & then again on Tuesday to a place 16
miles distant. The woman was carried on a stretcher during change &
was apparently none the worse for it. Afterward for the first few days after
was diphtheric but often it is very difficult to get them together.
Case 7. Compound fracture of humerus

On 28-10-90, a girl 8 years old, was brought into my Ambulance 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 at all the flesh around was soft & gangrenous. The arm was put under chloroform & the arm amputated mid way in the forearm. The arm did 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 since & the arm looks very well.

Epithelioma of penis

This case 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 base of the clitoris. A little difficulty was afterwards experienced in connection with the skin which was retained. The urethra had not yet been laid hold of after the operation & the soundings gradually obtained the external opening. The great difficulty was experienced in micturition. Consequently he was again put under chloroform & the urethra opened into from below the catheter inserted. He recovered from the original disease but secondary growths on both groins increased & afterwards, I believe, caused his death.

The second case was not so advanced when first seen. In July 92 he came to me in great pain with the statement that the clitoris had begun 4 months before & had gradually been increasing ever since. The growth was of a fungating character. The urethra was almost, if not entirely, confined to the foreskin. The prepuce glands were not apparently involved. He was put under chloroform the diseased part removed & recovery was intimate.

Hydrocephalos

This is a disease which is not uncommon in India & many other places have had two cases of it & the curative treatment which I tried seems to be of little or no use. In the first case the woman had been ill for a day or two
before I knew of the case, it had been in just 2 or 3 hours before death.
Hypodermic injection of curare was tried and seemed to have little effect. The
injection was followed with a feeling that about 18 months had elapsed since
the patient had been bitten by the rapid fire of a lion. Both at the time about 20
persons unfortunately beamed before. It would seem as if there were no limit
the two at which the disease may last, one in which has entered the
system.

The second case I had under observation and treatment during practical
of the whole course of the disease. One I began to manifest itself externally.
On May 11th, a boy aged 17 was brought by my having to be
bitten on the head of a dog. There were several wounds on the body and on
the arms, but those were healed on. He had been bitten about 6 weeks before
and then, a boy aged 17, had been bitten by the same dog had since died.
This boy took ill in the evening of the 11th and brought on in the
morning of the 11th. Respiratory system in attempting to drink water was
distinctly present. The fell fell, and also fever, she left and
sudden. Otherwise assumed the condition; the pain and fever had been offered
head, had attempted to drink it should not have been certain that there was
anything the matter with him beyond a little fever. His respiration, however,
was distinctly irregular. As difficult to count. The following is the treatment of
the course of the disease during the 11th

<table>
<thead>
<tr>
<th>Time</th>
<th>12h</th>
<th>13h</th>
<th>14h</th>
<th>15h</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30</td>
<td>112</td>
<td>36</td>
<td></td>
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<tr>
<td>9-15</td>
<td>120</td>
<td>101</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>10-0</td>
<td>110</td>
<td>102</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>11-15</td>
<td>120</td>
<td>122</td>
<td>26</td>
<td></td>
</tr>
</tbody>
</table>

Skin dry; reserve of soot - 30t. followed by motion

11:15

With 3 stimulant mixture of speaking; 1/2 g curare

General mixture.

1-30 | 107 | 101 | 8    | 3p
30   | 130 | 103 | 2p   |
4-0   |     |     |      |
6-30  |     |     |      |
8-0   |     |     |      |

Skin dry

Pleuricurin 1/2 g

Died

After 6.30 p.m. treatment was stopped. Nothing seemed to delay any good. The
curare had appeared no effect whatever on the course of the disease. I must say

Remark: Treatment

Pleuricurin & 3 g. Hypodermically

Skin moist

Skin wet: no sensation

Skin wet

Skin dry; reserve of soot - 30t. followed by motion

11:15

With 3 stimulant mixture of speaking; 1/2 g curare

General mixture.
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 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 snake bites, so in Scorpion stings, there are great varieties in the effects. These depend both on the poison & on the person's age. 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 sting 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 of 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 without only with difficulty the man recovered.

As to treatment I have tried the hypodermic injection of caeruleum hydrochlorate in doses of 0.5 or 1.0 gr. I generally give two forces & repeat it if the result is not unsatisfactory. All other kinds of treatment, ammonia & the like seemed to me to be useless; but caeruleum acts often like a charm, the sufferer almost in a moment becoming free from pain. It seems like a kind of antidote, a specific against the poison; not only acting in the way of neutralizing the poison nerves but rendering them incapable of giving pain. I have, if some hours elapsed before the poison has in consequence well-perforated the part I reached, I unpublished the caeruleum plaster. Osmium oxides little effect.
The following case however shows that it is not altogether inapplicable. One morning a man came to my dispensary in great distress from breathing of a scorpion in his leg. I injected hypodermically \( \frac{3}{8} \) s. of cocaine and the pain was immediately relieved. In 10 minutes, however, when I again saw him he was decidedly worse. I exhibited symptoms which were alarming. The pain in the leg was severe, the patient was delirious, sweating and the patient was almost imperceptible. I injected 3 more doses, but it was too weak, exhibiting symptoms that I was unable to control. The patient complained of severe pains in the leg and the breathing. Afterwards there was a little giddiness, but no 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, but the patient improved. The breathing was so bad that for a little artificial respiration was tried, but it was not possible to improve. The treatment brought the head back in something like hours from the beginning of the attack. But for 10 hours afterwards, the patient remained in the first three cases present also alternative of ool and several other cases. Next morning the man was well and taking about. The scorpion in this case was said to be 5 or 6 inches long. This may account for the severity of the symptoms. Here is, of course, just the other explanation that arising because the scorpion on the foot of the man was a case of Cocaine poisoning. The amount of cocaine administered was not so much as I often gave on some of the symptoms which do not coincide with other same cases of Cocaine poisoning. The symptoms, the pulse, the respiration might point to the cocaine; but on the other hand the following symptoms are like those for snake poisoning cases: vomiting, respiration, salivation, cold sweat, muscular stiffness, rigor, and subnormal temperature. There was an absence of numbness, confusion of ideas. I should of course as probably would have been present in Cocaine poisoning. I wished if the saliva & perspiration being less at the time of the poison raised they were the opposite. There was an apparent paralysis of some aches or restless or dizziness about the man.

Depress

This is a disease which is not very common in the villages of the part of the country, but we are always seeing some one here and there afflicted with it.
The recent Commission has brought this disease prominently to the public at the present time. The result of it would have been very surprising, notably in regard to the contagiousness of the disease. Only a very small per cent of cases, I think, about 5%, could be attributed to contagion or heredity. This inference of my experience goes, to prove that just as in human beings there is an unreasoning to avoid any unhealthy soil in a family, so in India an unreasoned aversion to telling all the truths about leprosy in one's family. And when a leper is met with in a strange village among the people who have known him in his family, they can scarcely believe that the story is true of the family history: it indeed often when he is asked if he does not reply quickly the epidemiology villagers reply frin it. This may explain, to some extent how it is that leprosy is not to be found very generally in the same family.

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 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 cases can very readily be healed by ordinary antiseptic precautions. By the application of a lotion of Tannin Turanadus 5%, in 24 hours.

The treatment of the disease itself is a much more difficult matter. As I will mention later 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. Sakh, 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 afflicted for 5 to 6 years previous to his death. This might point to contagion as being the cause of the daughter contracting the disease. She comes in 3 sisters 1 brother 1 they constituted the
Panda aged 30, has been affected for 10 years with the disease. No history of leprosy can be made out. He never was affected with the disease. He was fairly well fed, not a great fish eater, has lost salt in abundance and is no history of syphilis.

Tubercles are only slightly present on the face, and there is no anaesthesia there; indeed the only part of the body where there is anaesthesia is on the external 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, which is his condition at present; but, when examined a few months ago, there were tubercles present on the epigastrium, below the right & left nipples, on the lumbar region behind & in the skin of both thighs. These tubercles have disappeared & he is decidedly in a better condition than before the disease so himself. He has gained 12 lbs in the last two months. The treatment adopted in his case has been that of black walnut oil externally, internally, the same oil in quantities with Ag Calcis. It seems to have had a good effect in this case.
Case III

Gacia: age about 35. In this case there is a history of his mother's brother being affected with the disease, so that perhaps he may have something to do with his contracting it.

Tubules are present in the ears, forehead, nose & chin, but there is no anaesthesia in the face, indeed rather as my experience goes anaesthesia is a rare thing in this face. It generally is present first of all at any rate in the hands that. It is so in this case. Anaesthesia is present in hands on the palmar surface & dorsal surface and on the dorsum of the feet but not the toes. In the right arm a few tubules are present on the radius, low down, but there are no tubules on the left arm. There is considerable loss of hair by absorption in all the fingers & the thumbs that are left are bent & out of shape. Illness 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 hair in some of the toes.

The treatment adopted in this case has been uraneo; & Knappe pills have been given. I twice a day & a liniment of Resorcin has been used externally. He does not show much of improvement; rather, I think, the disease is progressing. The liniment tends to be better than before the bad gained in weight 20s in the last 2 months.

It cannot be said that I have seen anything brilliant in the treatment of erysipelas, 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, have been able to do.