DEPROSYS
and its Treatment.
by
Charles F. Flannery, M.D.
April 1879.
To Principal Authors whose writings have been consulted are

Danielson
Brock
Hansen
Helen Kephart
Vandyke Carter
William Hunter
Macnamara
H. Living
McLennan
Tilton

drew Hume

Re forming Committee of the R.C.P. of E.

Several other medical men, Europeans and

Native in India, China & here learned. Have
talked about them personally.

C. F. B.
Although leprosy is happily excessively rare, in the present day, in our own country and comparatively so in Europe as a whole, it is still fearfully common— if not actually on the increase—in Asia and Africa; and, therefore, as I have lately had opportunities of studying its disease in some of its favourite localities, I have thought that perhaps it would not be out of place as the subject of my first chapter in this Essay. As it is, of course, quite inadmissible, within the short limits of an Essay, to write anything like an exhaustive treatise on such a disease in all its bearings, I have determined to devote myself principally to its Clinical History and Treatment, touching no more on its Etiology, Pathology, than is absolutely necessary to indicate the proper course of treatment to be adopted.

Leprosy has been recognized as a disease for more than 5000 years, but it is only recently that it has ceased to be confounded with several other maladies—especially with the so-called "Jewish Leprosy" (really a form of Verrucodermia), with Elephantiasis, Agranum, or Balbodoo def; with Syphilis, and Syphilus— but it is now recognized as a distinct constitutional disease, principally
young adults and the male sex.

Various classifications, in attempts at clari-
ification, the diseases have been made by
different authors, based upon the symptoms
and external appearance - the most popular
dividing into the "antarctic", "Tubercular,
and "malarial": But, as Hahn and Koch
point out, we cannot consider each feaver
the separate or well defined species, as
they often pass indiscernibly into one another.
I may even be all present in the same
individual. Hahn in Koch, states that,
in 141 cases of Tubercular Lepra, he
only found complete sensibility of the skin
in 9. Three recent cases, and my own
experience in the Carl. Arabia, corroborate
this statement; indeed I never remember
I have seen a patient suffering from the
disease at all in which sensibility was
not more or less impaired, while, in about
20 per cent., it was really impossible to
day, whether the symptoms of the Antarctic
or tubercular type predominated. And this
seems the only time which is to be expected.
A leprophy may develop which presents
fibrous tumors and the heres; in the tuber-
cular variety, the former are more promi-


See at: "antarctic" and "malarial"...
a person may be affected with one type, and his
may appear in his child), and if both are not
affected, it is only because the disease kills
its parents before it takes time, so effects it.
I shewed the full extent — whereas I fully
believe that every case would, in course of time,
present the features of "induced" lyphoma.
Having thus explained how much, or rather
how little, importance I attach to the
division, I shall proceed to describe the
casino under its leadership of Cervantes and
Tolstoy's depictions, as in its earlier stage all
cases, the two types really do present a
different appearance. The so-called "melan-
oma" type I shall not further refer to, as it
appears true the rotting waste is then a more
usual early stage of the disease.
The period of incubation is perfectly indefinite,
but a premonitory stage is described by the
homeopathic physicians which is certainly met to
well noticed in the case, and occurs (as
in Typhus — indeed in hardly any of the
cases I have seen this time — many symptoms
(excepting the theft, sometimes these of depression)
before the nature of the disease clearly indicated
itself. In homoeopathy, however, they are described
as consisting of a general feeling of languidness,
malaise, loss of appetite, nausea. Vomiting
while walking, especially occurring at night,
time, and sometimes accompanied by pains
in the back. It seems treating this of acute
symptomatism...
This state of affairs has been known for years, and it is generally said to be at least of a couple of months' duration. Boche says it is probable the cordiformia are left to remain in the oncarthciis or in the tube. Other forms, after all, in fact, among it is attached, he only found them in 9. As the oncarthciis form is much the commoner in the last, this may account for their compa-nionate abstinence here.

The nature of the melody may find expression itself by an extension stage, or by develop-ment of ascenrsion, or (and I think, more commonly), by a combination of the two. A small, -in the last, small sounds — will generally tell you that the fruit is not a spot like no woman at the, at the same time, his hand fell brunt I wove. Occasional un-comfortable feelings on also often described in the upper extremities, in a kind of apprised "needles-and-spins", that I have never myself met with much dyspho-rxia as described by European authors. Certain forms of oncarthciis, to which one is el-

ways present. In the pale skint of European Persim, Chinese it, the oncarthciis is of a dark color — generally reddish-brown, or even purple — but in the dark colored races of India the oncarthciis is essentially of a paler color than the healthy oncarthciiss, this may even
The character of the eruption varies considerably. Commonly, it consists of rounded, circular or dermoidoform patches from ½ in. to 1 in. in diameter, with irised edges, in the pale rose, a dark pink hue. The centre of the patches is generally dry, shrunken and eburnulated, and the most characteristic patches generally occur in localities exposed to irritation and those are less exposed, such as the elbow, knee, back, front of knee. These patches are not at first permanent, but die away after a time, either leaving no trace behind them, or else slightly, or else a more or less eburnulated patch. They soon return, however, and show a decided tendency to run into one another, so that the epidermis patches are frequently so large as to pass for the hand. Dr. Vanderke Carter notes that whatever length of time is required hyperemia edge to long have they a tendency by breed. The seborrhoeic, which more chronic function of the Stolin, in his observations is considerably interfered with, as the hairs in the patches are either shed and fall out, or become whitened. According to Hahnemann the reason why the hairs fall out in this they are pruned off by the hyperkeratosis epithelium of the hair-follicle. In human

*On the History of Leprosy, S. V. Carter 1872.*

*Handbook of Leprosy, Ceylon. Bond 2 1871.*
at first hyperaemic. In many cases among dark races, at all events, I have noticed a dimple below the colouration of the skin with a crater from 1/8 of an inch, which appeared likely to be permanent. The older spots, and as described above, frequently leave such patches behind them differing little from the healthy skin in appearance, but being decided in.

At the same time as the cramp-furuncle, bullae often occur, either simply or in crops. They are considered by some like indications that the anaetheliæ will be the type ultimately assumed, but Dr. Carter tells me that he has never seen them developed except on a surface already anaetheliæ. They vary in size, but are seldom as large as one inch in diameter, contain a slightly coloured fluid, and generally last for about three days, when they either burst, leaving a coloured patch behind, or burn causing a raw surface which may ulcerate. Their favourite seat is the digits.

The temperature of lepromatous leprosy is either a degree, or degrees and a half below the normal as a usual rule, but attacks of fever are not uncommon. These attacks are probably either due to a cramp-furuncle in the blood or to mucus material — thesecretory function being interfered with — or else to the deposit of altered matter in the internal organs. When
The fever usually, exquisitely dry. N. during 11 p.m. S. R. during.

give an instructive case of temperature and pulse in a patient, from which the following is extracted.

<table>
<thead>
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<td>29</td>
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<td>97°</td>
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</table>

"The febrile attack was coincident with the formation of new lesions on the face, arms, and abdomen, and pain in the hand and right arm."

*"Eucheiriasi Saramurii"* S. R. Lewis M.D.
A distinguishing characteristic of this variety is sufficiently indicated by its name, but it is not always in the earliest stages of the disease that anaesthesia is present. According to some observers there is, at first, hyperaesthesia. At the outer part of a patch it is said to be sometimes hyperaesthesia; expanded, while the centre is anæsthesia.

I cannot deny that I have ever myself seen this hyperaesthesia, but shooting, prickling, even burning sensations, accompanied by movements resembling those of charcoaly no means uncommon. These symptoms I attribute to presence on the nerve fibres by the reforms not released. In everyday life, slight presence on a superficial nerve will give rise to uncomfortable sensations — if more prolonged, it becomes very distressing. I have more so, by paralysis.

And so it is, I fancy, in the various stages of "nerve leprosy." In this variety, then, the anaesthesia may either be the first noticeable symptom, or (and more generally), it may be contumacious with, or follow the eruption. The burst of the nerve affecting the extensor system or the nerves of arm, hand, and foot, the central nervous system, the nerves of arm, hand, and foot, generally, left free. Therefore the first symptom noticed is impairment of the tactile sense, often a loss of appreciation
Temperature or pain: it is only in advanced cases, where the pressure on the nerve is sufficiently great to cause pain; do that the muscular tension is tense. The thickening of the nerves is sometimes so great that the ulnar or other superficial nerves may often be distinctly felt. Donelson, in writing on this subject, says that, among the cutaneous nerves, the anterior division of the larger external cutaneous is usually the first affected, then the external cutaneous, while the lesser external cutaneous is much less frequently affected. The ulnar nerve is almost constantly to, primarily, in its bed immediately above the internal condyle of the humerus. The median and ulnar nerves are also not infrequently diseased. In the leg, the nerves affected are the sciatic, tibial, saphenous, and both of these nerves are deeper in the latter two are nearer to within the femur. In the head, branches of the trigeminal are frequently found diseased. But, as a matter of fact, there is no part of the body which may not become anaesthetic, and in advanced cases, nearly the whole body may be so. At times, the entire body is completely. I have been a patient in Calcutta, who at one time received a severe burn, and at another time, was scalded with boiling water without experiencing the slightest pain.

Dominion, in Cutch, 1862.
The dermatitis are almost invariably attacks by the onæeræria. In about 40 per cent of the patients I have seen the entire legs and the entire arms had succumbed. The next-favorite site appears to be the face and ears. The following table compiled by Dr. Lewis Cunningham shows the proportion in which the various parts of the body are attacked by onæeræria.

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Number of Cases</th>
</tr>
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<tbody>
<tr>
<td>Entire legs</td>
<td>49</td>
</tr>
<tr>
<td>Entire arms</td>
<td>48</td>
</tr>
<tr>
<td>Face and ears</td>
<td>28</td>
</tr>
<tr>
<td>Scalp</td>
<td>12</td>
</tr>
<tr>
<td>Neck</td>
<td>6</td>
</tr>
<tr>
<td>Entire arms</td>
<td>20</td>
</tr>
<tr>
<td>Entire legs</td>
<td>18</td>
</tr>
<tr>
<td>Entire arms from the elbow</td>
<td>13</td>
</tr>
<tr>
<td>Entire legs from the knees</td>
<td>15</td>
</tr>
</tbody>
</table>

As the disease advances, the patient presents the most pitiable aspect. It becomes much emaciated. The muscles atrophy owing to suspension of the nerve influence. This latter phenomenon is especially noticeable in the hands and feet, the digits of which become clubbed and arched owing to paralysis of the extensor muscles. The dorsum of the hand appears crease the palm flat, owing

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Report to Government on Lepra, by Lewis Cunningham.
owing to the paralysis and future degenera-
tion of the muscles. A flat surface or hollow
is substituted for the ball of the thumb, and
the fingers, then present, are turned outwards
like the base of a conical body. Blisters form on
their dorsal aspect, which at their way down to
the bone, in which, at the same time bleeding is taking
place, so that its terminal segment of
the phalanx actually fall or are thrust
off. Kingz., happily, without any pain to the
patient. After their removal, the altered
nail is returned, or it is renewed, & the 2nd phalanx
segment, and then, or that in the nail and
fall off, the third. A similar he-
cristal: of ulcerative process goes on in the
foot. In the worst cases, not only the
phalanx, but the carpus. There may
be removed by it. Herein, and generally,
are more uncommon in other
parts of the body, into deep, indolent
ulcers emitting an unhealthy discharge
are often met with especially in parts ex-
posed to external influences, such as the
elbow or knee. Wilson states, it is occasion-
ally after separation of a portion of a
hand or foot, a spontaneous cure takes place.
but I should imagine it permanent, if the
delusory delusions. The same authority, how-
ever fully concedes this, as a general rule,
the patient feels better as long as the ulcers are
seen. In Derrnatology, J. Pape, Cancerul 1873.
drinking freely, febrile attacks, such as were referred to before, usually subsiding when they heal. The nasal tones are often.

 irritated in some severe cases, and the tears and salvia often flow in profusion. This, owing to erosion of the lower eyelid's skin respecting from disease. 

 Spasmus of branches of the 5th or 7th nerves. The mucous membrane of the mouth is rarely affected in this form. Of course the rapidity with which these phenomena take place varies in different cases, but in from three months to as many years, there are usually considerable evidenees of mutilation.

From 12-14 years is the average duration of the disease in this form, the progress, as already stated, is most favourable. The usual immediate causes of death will be referred to further on. The accompanying drawings were taken from cases under the care of Prof. M. Yonkeil, of Calcutta Medical College, where kindness I am freely extended. Replication of hese from cases patients whom I saw at the Calcutta Defor Asylum. It would too hardly pretend the! Then is it faire after of all the cases, but it may, perhaps, be allowed before a brief description of a knife.

Plate 16. Hindu Student, under the care of Prof. M. Yonkeil, of fair complexion, age.
The disease is of 4 to 5 years duration and in the form of a slowly developing eruption consisting of patches of a circular shape distributed irregularly over the whole surface of the body. In a few months from its first appearance, the skin began to feel itchy. It was irritated by a native "guadz" which was worn. On admission, the skin over his back and chest was seen to be marked by more or less circular patches, about the size of a hazel nut. Austen, slightly raised at the margin and covered with tiny hairs, towards the centre. These patches are darker brown than the surrounding unaffected skin. It has slight thickening of the skin, lips, eyebrows and mucus, but no true tuberculation and tubercles are unscarred. The fingers are slightly exfoliated. Their extremities are swollen and ulcerated, and small ulcers are also ulcerated over the knuckle-joints. There is also ulceration over the terminal joint of the fingers. The feet are not affected, with the exception of one deep and foul-tasting ulcer on the side of the right foot, in the fourth interdigital crease. There is also ulceration on the elbows. The extremities of the fingers are decidedly scurvy-like, but the toes are not so. Both the ulcerative and considerate thickening Spanish, and along
The crown of the right horse above the elbow general small almond-shaped growth can be felt.

This case, I think, illustrates very fairly the appearance of well-marked case of incipient lupus of moderate standing.

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**Tubercular Lesions.**

This form of the disease is commoner than the cutaneous in Europe, but in India and Southern Countries in America, it is much the rarer of the two—only about ten per cent of the cases belonging to it begin with, and more often even, as I have stated before, superceding the cutaneous type in the latter stage. The presymptomatic stage, when present, is the same as that described before. Much the same may be said of the Lupus form. Macule appear in its skin, which eventually becomes permanent, varying in size from a shaving to the palm of the hand, raised and discoloured at the periphery (at all events, while they are spreading), but dry and shi
The tubercles, are of a roundish shape, harder to the touch than the surrounding skin, and of a somewhat elastic consistence. They ordinarily vary in size from that of a small shot to a bullet, but in one case, at least, that I have seen (see accompanying photograph) one was very much larger. (See footnote.)

This, though the most remarkable case here. I have seen of the new formation was that of a typical case when I saw the patient he had been in the Celestial fever regimen for 16 years, having been altogether affected with the disease for 25 years! He complained of feeling weak, but in another way. There was no pain his bladder, in the other hand we have any well marked anesthesia. The trunk was simply covered with tubercular masses, varying in size from a pin's head to a lens off - the last being on the left hypochondriac region. On the back, the tubercles were large, as numerous as on the head and abdomen. All were from one to large of larger than a well. The face was less markedly affected. Though there were numerous, smaller tubercles, often it. There was little or no thickening of the skin of the forehead. The scalp was particularly affected on the left side of its right edge, leaving a bare.

There was no evidence of either diaphorosis or phlegm.
Very far advanced typhus with marked tubercle strain of face & chest.

Ab. 26.
To begin with, the tubercles are vascular and are sometimes painful on pressure, but in tolerably advanced cases, I have never found them like hyperaesthesia, or most frequently they are, on the other hand, anaesthetic. They are either cutaneous or subcutaneous - in the face, although its appearance is much the same, transfixation of the skin is much more common than transfixation, except in the case of the eyebrows. The face is, however, very commonly affected. Booth says he found it like in 55 cases out of 100, while I saw it face only was affected. The whole skin of the face is generally much thickened, with palpable arteries. The colour is changed to a reddish brown. The integument of the forehead in especially thickened - the folds being deepened, and the eyes half closed by the thickened eyelids. The nose is broad, flattened, the lips are truncated and erected, and curiously and stiffly, from the head with uncommonly enlarged bony. If hair in the face is destroyed, without scabbing, and on, in fact, the face acquires what is known as the "lemon" expression: but the face, for the lips the tubercles are much commonly affected, being often converted with more or less into Dr. Bannerman mentions it, prep. to being a very common kind of tubercle. They are seen in the palmar surface of hands and ears of the feet, but the fingers of men are very characteristic. They may be seen flexed as in the case, it is


Notizie sulle infiltrazioni cutanee del viso e sulla nel corpo.
form, and enlarged at the extremities. It
being more flattened at than in the presence of
later. The hairs become dull, dry, and
frayed, they sometimes undergo a dry
recurrence until only the stumps are left.
Where the tubercles are closely packed together
ulceration may take place, or a fungoid
mass be formed, but I do not think that
this is common unless, (perhaps I should
say until) the anæsthetic type supersedes.
When it does take place prematurely, it is gen-
early and over the joints, and probably due
to either pressure or accident. In the later
stages of the disease, ulcers of fungoid
may take place, as in the anæsthetic type.
The life of the individual tubercles may end by
ulceration or more rarely by abscess forma-
tion, but commonly they undergo a process
of involution. The tubercles undergoing chiefly
becoming absorbed leave behind them a
defoliated scar, which, in the European, is deep
ly pigmented. In the colored races, it is
usually white. An individual tubercle in the
skin may, however, last years before it
takes place at the process of involution itself
frequently takes a month to complete.

Dr. Heman says that when a tubercle is
10th, change begins either over a depressed space
or in one spot generally near the centre of the mass.
The disease here is yellowish brown. The chief contrast with the surrounding parts, whose appearance is bright white and flattening, etc. of summit. At a later stage of festering, there is the sediment found a cavity filled with detritus of a reddish-brown hue. The contents being due to an irregularity in the red vessels of which remain almost un-affected.

At the same time, in the strain, tubercular deposit take place in the glands, especially of the spine, which are hard and sometimes tender. The tubercle also are in some cases affected. Subsidence of the tubercles is however not to rely after the tubercles have existed for some time in the strain that they become developed in the time to membranes. Soon, however, the talent are nearly all affected. The hard palate becomes nodulated and fissured. Tongue, as far as my own experience goes, this is rarely the case in 15 soft palate and tongue. The tongue becomes thickened of stuff. The epithelium on the dome is much proliferated. Appearance grey, or grey while the papilla stand out prominently. The epithelium becomes thick and miterable, and the vocal cords seen to be likewise affected giving rise to the harsh, sickly voice. While which are incidentally frightened. In advanced cases, the epithelium of the nose also is tuberculated.
and the sense of smell last, and occasionally
spasms of the heart with unpleasant sensations, while apoplexy is comparatively
common. True cataract symptoms, however,
when they are present, are probably a result
of local as of specific origin; they depend
mainly on the enlarged upper eyelid. The
form of the disease with rapidity more
rapidly than the cataract, usually in about
3 years.

The immediate cause of death in a case of Leu-
comyelitis may be due to marasmus or pneumonia, or may follow one of the peripheral
attacks mentioned before, or may be due
to hemorrhage; but more commonly, it is ini-
mEDIATELY DUE TO MUSCULAR PARALYSIS in
Tubercular Sclerosis (which, as would be suppose-
ed, is not infrequently present); or more com-
monly still to an attack of diarrhea, which, in the last, at all events, is commonly
and equally difficult to check.

As it was stated before, it is really impossible
to do short a paper, hence a full description
of the fearful disease, but I hope that what
I have written will give, at least, a very
text of it.
Before proceeding to the subject of the Treatment of Depresion, it will be necessary to consider briefly some points in connection with its etiology.

The primary cause of depression, if ever known, is that in antiquity, heretofore there existed certain predisposing, and, on the other hand, countering, agents. It will be obvious to anyone who considers the history of this disease, especially in Europe during the last few centuries. The chief predisposing causes (which are, however, very unequal in importance), may be cited:

1. Heredity, Tendancy.
2. Melancholy.
3. Diet.
4. Syphilis.
5. Contagion.
6. Climate.
7. Soil.
8. Race.

At world, arising about 1500 B.C., Egypt. Because physical exercise, excessive alcohol, too much heat or cold, eating food after sunset, eating of flesh and milk, use of hered, diseases, other pains involving milk and water, excessive sexual intemperance, insufficient exercise, fever, labor, fatigue, infection of the body, etc.

V: Proceedings of the Medical Society, 1891.

Depression in women is generally considered to have originated in the banks of the Nile, there after spread from Africa to Spain, then to Europe, particularly during the time of the Crusades.
The fact is so generally admitted as an important factor that I need hardly do more than mention it. Danchelson and
Brock state that out of 213 cases occurring in western France 187 occurred in lemonos
families. Perhaps they use the word "family" in a wider sense than it is
used in ordinary parlance, but, as far as
my own experience in the East goes, nearly one
half of the cases may be accounted for by
hereditary transmission. Out of 623
cases reported to the London College of Physi-
cians 287 were known to be hereditary.

2. Although defective hygiene is not acti-
vely a cause of deficiency, it is not like
thought at that a disease essentially
depressing in its character should be, at
all events, fostered by it. And history shows
that in proportion as civilization advanced
and sanitary arrangements came to be
ensured in England and other countries, so
deficiency lost its hold — and, in the present
day, it is rarely found except in countries
where hygiene, public or private, is more
interchangeable.

3. The above remarks will apply equally
to bad diet. Many authors maintain that
deficiency is especially prone to attack people
who subsist principally on fish, and adduce
its known opinions as an example. But, in
considering the question, it must not be for-

- Gideon
That, in the first place, the inhabitants of her
way not only eat fish, but eat it in a state
of decomposition — which fact might alone
account for the constitution being flowered, &
thereby render it capable to resist diseases — &
duly the depoly exists in many countries,
C. I. pasty of Pria & India, where fish is
unknown as an article of diet. Oth, again,
in other pasty C, according to Dr. Richardson's
Babara, steering fish is often consumed
but depoly is unknown, while at Bonavista,
where fish is scarce, it is used.

Other authors, with perhaps, more reason, main-
tion the abominable of such vegetables, as certain
potash as a possible cause — with respect to
Tillbury, &c. notice they, though in Ireland
has hygiene and bad diet prevail, there is no
defency, and suggests that the large consump-
tion of the potato as a possible offering of
the future, also, in the author's of Dr. Halden's
that the disease has decreased in Ireland since
the introduction of the potato in the island.
While on the subject of vegetable diet, it may
be noted as a very possible hypothesis that disease
sodium may have some effect — Dr. Millbrook tells
K. Pearson, in particular, and that this
may be so. It is undoubtedly the case that
the sodium and stables articles of food.
in most Countries in which Syphilis is prevalent.
and the fact that the cell of that human tropical
virus pachyplasia lends additional weight
this argument.
4. I have noticed that among the natives of
India & China, Syphilitic eruptions are attributed
to a syphilitic poison in the mercury treat-
ment of Syphilis. One native medical man,
told me he considered more than half
his cases under his care were due to "Venereal
Disease." Be this as it may, it is undeniably
by the case that a large proportion of
these are also syphilitic.
5. The question of ant-again is still, however,
"sub judice." In the report of the P. L. P. I. it
is stated that, "The all but unanimous
opinion of the most experienced observers in
different parts of the world is Brule opposed to
belief that Syphylis is contagious, is communica-
table by proximity or contact with the diseased
thus Syphylis is merely, if ever, trans-
mittable by sexual intercourse. When one of
the parties has no tendency whatever to the disease,
this latter is certainly a very rare case; but
if one of the parties has it, the syphilitism of
syphilis, it is a little difficult to account
for such a state of affairs, as that reported by
Dr. Hillebrand in the Sandwich Islands. The
virus was first introduced to the Sandwich in
1848, and the lesions, suffering from it, have
amounted nearly 1,000. In discussing these cases,
I impress on you the necessity of
opposing these diseases & Syphilis.
in his opinion, it is insusceptible in certain stages of the disease. Dr. Wilson considers that it may be contracted in some countries, but not in others. The same author further considers that it may be conveyed by sucking-in alvei given off by the lepros, but it is also highly probable that it may be conveyed through the human agency, though it is not also to this through the taints.

I think that my own opinion is strongly in favour of the possibility of inoculation at all events — cases not being very common of medical men or hospital dressers contracting the disease, and of white men becoming affected after Colonel Wilcox's case among the lepers in women.

6. Leprosy is undoubtedly more common in tropical than in temperate climates, but of course it does not necessarily follow from this fact that it is really influenced by the heat; and it must be remembered that in parts of the world where the climate is tropical are also those where the principles of hygiene are least disregarded. But a few centuries ago, leprosy was alike the bane of ruritain and of Southern Europe, and even now it lies for its favourite climes, such countries as Norway and Iceland, where the climate is certainly very far removed from a tropical one.

+ Lecture in Demutology S. C. Wilson 1873.
Prevalence of the disease in India is often spoken of as exemplifying climatic influence, but I think those who do so hardly consider that an immense tract of country and what great differences of climate can be found in India, even though it be entirely in the tropical zone. I will only cite one illustrative fact. Whereas the average number of lepers within the Bengal Presidency is 5.2 per 10,000, in the Humnauz District it is as high as 21 per 10,000. How Humnauz forms a district of the N.W. Province about 7000 square miles in area extending across the Southern Siama-Cayan range to the Central. There may here be said to be every variety of climate and temperature, as the district includes low lying marshy lands, but at the same time and principally, mountainous ranges in which many of the peaks are over 20,000 feet in height. Other similar instances might easily be adduced, especially in South America. Dr. Living tells me that in his opinion any extreme of climate is bad for lepers, and in this idea I here do not differ in the least.

7. As to Soil — Leprosy is certainly more common along the marshy banks of rivers, and on level sand-boards, although, of course, there are many striking exceptions to this statement.

But as dividing points into which we divide in fact the elevation above the sea, the distance from its shores, which is, in any way, antagonistic to the climate, but the development of agriculture and its artificial change of the soil, which is generally the found in inland districts.

8. As the question whether the race is more that it attracts one race than another has hearing has no bearing on the subject of treatment, I shall do is more than first mention it as a possible predisposing factor. Personally, I much doubt whether race, peace, exercises any influence whatever on the matter.
Treatment.

Before considering any therapeutic agent, which should have been employed with the view of checking the fall disease, I must call attention to the necessity of counteracting the putrid poisoning that we are just commencing to enumerate in the first place. Preventive treatment is clearly indicated by the consideration of the etiology of the disease. Whether or not the theory of contagion is tenable, there is no doubt that all devices have proved much more successful in the treatment of patients in England and other countries. In America, the result is all the more remarkable. Excellent Fever Asylums, such as the New York Hospital, have obtained most encouraging results, for whereas in 1856, the number of cases was 20% of the entire, it has been steadily decreased until in 1878 there were only 15% of cases. I would then make the following of the indigent Fever Asylums: so well ordered healthy asylums as hospitals; and, as the disease is universally admitted to be hereditary, I would see every precaution taken to prevent the birth of unhealthy children — not only by having the male asylums separate from the female, but by undergoing the marriage of young men, or the marriage of a young man with a healthy person.
of course it would be to many difficulties in a country such as India. For instance, in the way of carrying out such reforms and they must only be gradually effected: but, at all events, there can be no sufficient reason why government should not establish good examples, hear all affected parties instead of, as is at present the case, allowing lepers, with licences given, to trade among people in the bazaars, and bakers, who have lost their fingers from the disease, selling bread to their customers. The majority of lepers in India are paupers who live on the charity of charitable and religious bodies. They are persuaded to charge themselves entirely by having charitable bazaar held for them. It is, therefore, that the introduction of a Chinese Government will respect lepers. In the cancellations and amendments every Indian, leper, or leper's son, being, to a great extent, of any use, obliged to live by himself, outside its allies, and marriage between a leper and clean person being forbidden, that the law of the former reign.

Here, in the general treatment of diseased lepers, a leper's surroundings are favorable. In past severe description was few, if any, with only some interference, in an unhealthy district. He should, therefore, be at once removed to a healthy spot where the climate is good, and lepers generally should be considered of some moment importance. His death is usually.
of ordinary medicinal agents. Those that have been most commonly employed are, cod-liver oil, preparations of vin sanguinum, of mercury, arsenic, codine, alkalies, phosphates, carboni acid, sulphur, &c, as well as various external applications, various medicated baths and "specific" forms of treatment. In well hospital more particularly practice on -

Cod Liver Oil. Vin Sanguinum has been preserved in the form of this. Cod liver or vin sanguinum has been preserved in the form of this. Cod liver is a digestive decoction and may of course be useful in the way of strengthening the constitution.

Of mercury, preparations Mr. Donelson,

Shack find the best (labeled and labeled.
-

chloride ammonius produce intense vomiting and diarrhoea (though salivation is enumerated). After the draught it, in his 66

refers to their use -

for we became certain believe much in the virtues of arsenic - in the other hand.
Dr. Morebank & Dr. Dobson (V. Refers of the R.C.P. &c.) maintain that it is the only medicinal agent capable of keeping the disease in check.

Sodium chloride has occasionally done good, notably when the syphilitic rash is combined with the lepromi; but the outcome of these often produces a peculiar tumefied condition in the skin, so that they have to be constantly attended.

Alkalies offer little but undoubted useful in some cases, at all events in promoting its extinction of the disease.

Remedies seem to affectly heal.

Phosphorus has been tried after the year, but he saw no good effect — let it be known, could any such be expected if the patient only have disease is considered.

Dr. Haringg and others recommend Carbolic acid both internally and externally. I have never myself seen a patient in tents, but Dr. D'Anambel, says in his use of 5 2 Cc. of which the ratio is exhibited in carbolic acid wrought much change, but I could say its effects were beneficent.

I fancy much the same results would apply to the use of antimonials for internal and external purposes. As a mixture of salpeter, boric acid, spirit of cider, carbolic acid, &c., from which I claim to have had much benefit in a purely antimonial disease. Of course in individual cases it may be necessary to apply caustics, &c.
As the cases which should be adapted with respect to local ulcerations, in recent cases where there is any reasonable hope of a cure, slightly undermined extirpation may be tried. In healing processes, in advanced cases, patients generally feel worse. After attacks of fever come in when the ulcers cease to discharge, so that there is an improvement in the condition by getting them clearer, and it would therefore be best to keep them clean. It is natural to have other wounds on the limbs.
The Mort.

Effing has been freely resisted by his own

sense, under the management of physicians, and is thus too good by reducing the action more.

ment of the new growth, and to protect the

system.

(Secundum)

There are certain special modes of treat.

ment, which I shall now proceed to de.

scribe:

1. With Surprin-Oil. This olea, unknown but

recently was first used by Dr. J. D. Stiegel

and Dr. T. J. Swinburn of Port Blair on the En-

daman, apparently chiefly as an experi-

mental basis upon the fact that the Ganges-

Carpet Terri, from which it is obtained,

is common in the islands. The "oil" is

given both internally in doses and applied

externally with lime water. The Euphorus

of Port Blair are put under good sanitary

conditions and liberally fed, the early in

the morning, cleanse their teeth with dry

cake, take their dose of medicine when

put in the ointment, all over the affected part.

All Dr. Dingley's cases thus treated on said

treatment have been decidedly benefited. The

nees healed, the tubercles subsided and healed

diseases returned. . . . Softening begins

on the base of the tubercle, gradually affords

on the surface, where a white form of fovea

is a thin lenticular clear fluid, in advance of

which the nodules diminish in size, and

gradually become reduced. In particular
Mr. A. a sermon, who had lived in London for 14 years, and had, during that time, enjoyed good health until the appearance of attacks of fever, which had been recurring or syphilitic tomid. We in very frequent with a general feeling of malaise and with numbness about the body generally, and the head and feet in particular. Three weeks later noticed a bright-red slightly raised patch over the right eyelid, another over the left cheek and another on the chin. In another week the whole body was covered with similar patches. The state of the face, in contrast, is shown in the accompanying drawing. The ears, nose, and mouth are normal. The skin of all the fingers and toes has thickened in an irregular manner, darkened, and lost its lustre and luster. There were slightly raised reddish discolorations of the arms, legs, thighs, of the back, of the hands over the wrists, back, and abdomen. All smooth things and smooth things.

After the rapid treatment as described by Dr. Graves, the dark color over the face, hands, and feet had thinned down very much, and the bluish color over the head had thinned. The vision over the head was much better. In 6 months the return, leaving the eyes red and inflamed.

The use of the vein, or beddy wet these
ition in advanced at the modern period. It is but the wonder that such excellent results, obtained by such a simple and economical process, should lead to a general use of the Saffron oil throughout the adjacent Country of Orton. Unfortunately, however, the results obtained there have been hardly satisfactory. In many cases, undoubtedly marked improvement has taken place, but the general return of the disease in the majority of cases points to the conclusion that, after all, the cause of the same has yet to be discovered.

I fancy Sister Rempson of the Red Cross has, pretty accurately, expressed the general feeling of the Professor in Orton, when she says in his report to the Red Cross Government, "The Saffron oil does not possess any marked intrinsic value in the cure of leprosy. As a cheap and valuable emollient, it is well adapted to the carryings out of the principle of daily exercise instituted by Professor Rempson, but in all other respects and under all conditions included in his mode of treatment, the disease has done much good in improving the health and general comfort of the patients. Internally administered, it is an useful perfumary, producing a very pleasant feeling of lightness and exhilaration for a short time, but if frequently used its effects here that effect.

The following case treated by Dr. A. Forbell, in Calcutta, I cite as an example of a successful temporary "cure" but ultimate return of the dis
ten, before. The lips again treated with the suaripin oil, and after five months the lips discharged apparently cured. This time, however, the lips showed to continue the use of the oil. The case then elapsed. The lips twice been cured light of.

This is one of the most favorable examples of the mode of treatment. Not St. You will have to

The treatment by Chaulmoogry and otter oil being close with St. Impalls. They were administered

ble to internally and externally — the former in doses of 1/5-3/5

hit with 1 Chaulmoogry oil, St. Selkeram

try to Boome, in his report on this subject, says — under its prolonged and continuous

use of this oil. His purpose of the disease is cor-

verted, the skin becomes soft and supple, the

achetations vanish, the different trobilic

dentations cease. Its patient, its mental lab-

le paces away, its impaired sensibility

is completely or partially restored, its immune

feeling. Kings ever read, to help out of pain,

and the general nutrition of the patient improve.

The fact of the ulcer being “ever read, to help out of pain” shows this, attacks, the treatment

only leads to amelioration. Indeed S. A. Kings a strong advocate of the chaulmoogry treat-

ment, encompasses this the stability of poor-money of the cases are doubtful points. Further that

to make success probable, it is necessary that

the disease be of recent origin, that the general

health be little impaired and un-stained by
The treatment by outward application of Castor seed oil, advocated by Mr. Shaffer, although in the mistaken supposition that this agent acts as a local or systemic decoction, seems also to have been attended with considerable success in some cases. Mr. Saltmarsh, of Trinidad, says that it has more than answered his expectations in all his cases here recently reported.

The mode of treatment is as follows: Soap and water baths are used twice a day, after which the whole skin is well rubbed with Castor oil which is allowed to remain on for three or four hours. The Castor seed oil is applied on a small piece of cotton to the diseased parts, care being taken only to apply to a small portion of the affected surface at a time, and on interval of a week, being allowed between each application. Variations frequently occur after 12-24 hours. The skin, however, in the first two or three days, but the Castor seed allowed to remain and dry on. The crust remains on for 10 or 12 days, after which the skin is left free from ulceration. Sensibility is said to be restored after from one to three applications. Re-bandaging and subsequent state remain, case.
after each application until last a score
sent informed, then the "case" is said to be
cured. Dr. Bclnewell says that there
is generally no attendant pain, but in the
few cases, of which he had some, the patient
had fear of the cure. The question of
the patient's object to the treatment in
India is that the native object to it on the
score of the pain. Dr. Danielson thinks that
to obtain a better cure, it may be improved by,
one of the ointments with camomile, or of
aster oil, or even camphor. I do of opinion that
no external application either can or should change
in the depression and as in the nedy
the entire cephalic distance and in Dr. Bclnewell points out to the external application
that it may be based on a wrong principle, has a distinct effect on the constitution. The
temperature rising to 103° or 104° and remain-
ing high for some time.

Here an alteration in acnes. Ketii. Lepra may be
lately been performed by Prof. Danielson.
Saffron with decided good effect. It was sug-
gested to him by Dr. Lepra. Of Prof. Turbaum. Weber
in cases of scarlet fever, and the cases appear
sufficiently parallel to warrant its adoption.
In the acnes. Ketii. form of Lepra— for while
in the one there is chronic inflammation
of the connective tissue. The latter,
pressure on the nerve fibers by the tendons
in the other there is pressure on the fibers by the
deep fascia. Dr. Danielson says that he has
stretched the ulnar nerve in about 50 cases
of acnes. Ketii. Lepra, with in every case the
Indian med. gazette. Sept. 1879.
Operation was followed by benefit, except as the area supplied by this particular nerve was concerned, which appeared likely to be permanent.

The following is an illustrative case. Harry Chen Pei, Oct. 40, admitted July 1st, 1878 with a teichon patch on the back of the right hand. There was complete loss of sensation all over the back of the hand and wrist, and the hand was so weak that he could only feebly grasp with it. The ulnar nerve was very much thickened from the inner edge to the humerus to about half way up the arm.

The nerve was stretched in the usual way and on the third day he began to feel and forearm was found to be uniformly healthy, the sensation perfect throughout the area that had been previously occupied by the thickening of the ulnar nerve had disappeared. I think this treatment promises great results in this stage of improvement once given.

Electricity has been worked at in all forms, two cases of cases taken being one of the former. In one case the patient has discharged in 8 months much improved, but as in this case, had been subjected to 277 cathartics besides tepid baths and other treatment in addition to the Faradization, and an improvement commenced before it cessation was used. I think it is, at least, probable than the improvement has rather proceeded then...
In the second case, where
irreversibility alone has resulted to there
was no improvement. Her health I believe
any as there is not generally any effect
on the central nervous system in leprous,
the antimonials being done, as I have said
before, more in the home fevers.

At present, I think, it is inferred that the
treatment of this mortal disease is not
certainly satisfactory. It may be that
at some future day a "specific" will be
found, but until then we can at least
mitigate its horrors by hygiene and dietetic
treatment, by tonics, and such medicinal
agents as its purpin or echaumopine, or
by the process of home stretching first referred
to. I consider that, by these means,
every case can, at any rate, be amelio-
rated, and it is but impossible that, in
its early stages, its duration may be actu-
ally cured. At all events, its misfortune
of early presenting themselves, for treatment
cannot be too strongly impressed upon
the victims of leprosy.

FINIS.

[Signature]

Charles S. Stewart, M.B., B.S.