On Tubercular Leprosy

or

The Elephantiasis Graecorum

With some general observations on that disease as it prevails at the Cape of Good Hope.

With three plates... one... to be contrasted with the work of the Conradi.

By

E. Heereckho. April 4th, 1868.
Leprosy, which I have chosen for the subject of my thesis, is a disease which in its more intricate forms has long been regarded as incurable; and it is to be feared, it has not received from the medical profession that attention which from the very circumstance of its having hitherto eluded the skill of the physician in these particular forms, it might have been considered entitled to. Of late years, however, it has attracted more notice; and many valuable papers on the subject have appeared in the medical journals of the country. I might refer to the admirable accounts of it given by Professor Simpson of this University in the Edinburgh Medical and Surgical Journal of 1841-1842 and by Dr. Charles Wilson of London in the
and in New Zealand by Mr. Thompson.
Lancet of 1856; as also in the able description
of it given by Dr. Rininis, in the Edinburgh
Medical and Surgical Journal of 1834, as
it occurs at the Mauritius, and by
Dr. Tredes more recently in the Edinburgh
Medical Journal of 1857, as it is met
with in the Island of Jamaica. These
different accounts of the disease may have
thrown, it is to be hoped, some little
light upon its nature, and lead ultimately
to a sounder and more successful mode
of treatment.

Lepra is a term of extensive import,
and although used by many writers to
indicate one form of disease, may truly
be said to include several. From this
circumstance, and especially from its
application by some authors to diseases
of perfectly opposite nature, considerable
confusion, as it respects, has arisen in
biological arrangement. The word lepra is
derived from the Greek λεπρός, leper, and
it was intended therefore it may be inferred
to indicate a cutaneous disease and one of
a scaly nature; and ought to be classed
strictly as water on them diseases of the
present day have done under the orda
Syroama. In this sense it may apply
strictly to the leprosy of scripture, a disease
which rendered the subject of it unclean.
and in its more insidious forms, necessitated
his being excluded altogether from society.
Three different forms of this disease, which
is believed was brought originally from
Egypt, are described under the general name
of Lepra; one named Lepra meaning
brightness in an inferior sense, but which
was not considered contagious, nor such as
to render necessary that the subject of it
should be excluded from society; and
two called Lepra implying renoun or
malignity, and which whilst considered
highly contagious, rendered it imperative on
the person affected with the disease to
live isolated, and be cast off from all
intimacy with his fellow men. The
Title of Lepra, and which Dr. Mason
Gord is of opinion makes the nearest
approach to the leprosy of scripture,
is another cutaneous affection, to which
from the description given of it, the term Lepis might with propriety be applied. He describes also three varieties of it, the $\lambda\gamma\omega\varsigma$ or white, the $\mu\eta\varepsilon\alpha\varsigma$ or black, and the $\delta\epsilon\omega\kappa\nu\gamma$ or bright white; the two former not being generally difficult of cure, whilst the latter was regarded as strictly incurable. But beside these diseases and many others which might be mentioned and which from the mere circumstance of their inoffensiveness, their contagious nature or their incurability, were included under the generic name of Leprosy, we find two others more especially which do not at all come up to the meaning of the Greek word from which the term is derived. I allude to the Elephantiasis Acuta, and the Elephantiasis Gracorum, diseases may thrive at the same time widely different from each other and having no features in common. The former better known by the name of the Barbadoes Swelled Leg, as being endemic in that island, although also met with in various other parts of the world, was so designated from a supposed resemblance of the limb.
affected, from its huge and much open appearance is that of an Elephant. It is characterized by immense tumefaction and hardness of the parts affected, most commonly the limbs, with a thickened state of the integuments, which are usually of a bluish colour and rough and swollen. It is considered by most writers to be a disease of the lymphatics, and to originate in them: but others are of opinion, and amongst these is Cephalo, that whilst it arises most frequently from inflammation of the lymphatic system and skin, particularly in warm climates, it may also arise from inflammation and obstruction of the veins in some instances, and from extension of inflammation from the skin to the veins or lymphatics in other cases. The latter decade the Elephantiasis Grecorum or, as it may be translated, Elephant skin, and which is the subject of my thesis, has been so called from the skin in the parts affected being thick, crusty, and in some cases resembling that of the Elephant. It has also been called by some of the Greek writers,
Scleritis, from the fearful deformity of the face which occurs in the progress of the disease and the fancied resemblance of it, from the prominence of the eyebrows and its wrinkled state, to the face of a lion. The best definition of it is given by Sir Copland in his Dictionary of Practical Medicine. It is as follows: "Dusky red or livid tubercles of various sizes on the face, ears and extremities, thickened or rough state of the skin, a diminution of its sensibility and falling off of the hair, excepting that of the scalp, hands, nails or lock. Voice: organ: alteration of the surface and extreme fever." It is decidedly of a tubercular nature, and thus differing not only from the disease lepra, as we trace the meaning of that word, but as it has already noticed from the disease described by the Arabs under the same name. With regard to the use of the term Leprosy in Etymology, there seems then to have been great confusion. In the Middle Ages it appears then been applied indiscriminately to the different forms
Anesthesia free without tachycardia
Of Elephantiasis, the lepy diseases, and various other definite and incurable affections of the skin, for which Lepan Hospitals were established in different parts of Europe.

Of late years however something has been done to remedy this defect, notes on cutaneous diseases now at least drawing a line of distinction between the lepy diseases of the skin, more strictly deserving the name of leprosy and the different forms of Elephantiasis in the form of disease under the name of Lepan, which I have chosen for my thesis upon the authority of Pillan and Betemen, these applied the name Intercular Lepanay as at once descriptive of the nature of the disease and of Elephantiasis Leperum as the name by which it has been known from the earliest periods downwards, and attaching to that term the meaning of Elephant Skin, as not altogether inappropriate.

With these few prefatory remarks, I now proceed to describe the disease, noticing briefly its history, symptoms, causes, diagnosis, prognosis, and treatment.
And having done so, I shall give a short account of the disease as it prevails at the Cape of Good Hope, from information which I have received from my respected Father, now a Medical Practitioner in that part of the World for upwards of thirty years, and who has had consequently it may be supposed ample opportunities of acquiring a knowledge of it. From the latter it would appear I think that the disease as it seems at the Cape of Good Hope, is precisely the same as prevails in the island of Jamaica and probably as from further research shall be known identically, the same as is met with in most warm climates.

Indeed it may be asserted perhaps and without much fear of contradiction that of the various diseases described under the name of Lepercy, the Elephantiasis Scrofulosa, was not only the form in which it appeared in Europe, during the middle ages, but as it is known at the present time and throughout the world.
History of the Disease.

Tubercular Leprosy or Elephantiasis is not as appears antiquity, to be compared to the Leprosy of Scripture. Nevertheless from Arabic and Greek writers it was evidently known at a pretty early period of the world's history, Celsius who lived in the 1st century, and whose treatise "De Medicina" contains a general compendium of Phygæ and Surgery, derived chiefly from the works of Hippocrates and Celsus, in his third book paragraph 25th makes the following allusion to it: "Speratus annum pane in Italia, frequentissimus inquit sedam venerunt in spectatórum regionem esumor est, quem epidæmion Graeci vocant; loco longior altitudinum". And Celsius who lived in the second century speaks of it as a disease, common in Alexandria, owing to the full and rich living, and the heat of the climate. The disease as the researches of Sir Lempereau show, prevailed also extensively, it would appear in the British Isles.
and in various parts of Europe during the middle ages, and has been handed down to us, most correctly described by medical writers of that period. Amongst others Guy de Chauliac who lived in the fourteenth century, gives the following most accurate account of it: "Rotundity of the ears and eyes; thickening and tenuity of the eyelids with falling off of their hair; dilatation and distension of the breasts externally and structure of them within, and freckling of the birth and of the white person; fixed and horrible exanthem-like aspect. And although the disease is met with at first chiefly in warm climates, and is not known in many parts of Europe where it formerly prevailed, still in some of the hotter parts. I allude to Norway, Iceland &c., a disease either the same precisely, or one closely allied to it, is met with under the name of scrofula. A disease which also prevails at times in the Balkan territory; and one that has been
described as the African disease, most also from the accounts given of them, closely resemble the disease under consideration. It would thus appear to met with in climates diametrically opposite in regard to temperature. It is true as that already stated, it prevails at the present time more particularly in warm climates; but if we find, as has been already shown that the same disease exists in cold climates, it makes it difficult to trace any cause whatever for its dependence directly on temperature.

**Symptoms.**

The disease, it has been observed, is usually preceded by a peculiar feeling of languor and listlessness, and a general depression of spirits; and is occasionally ushered in by febrile symptoms. The face is then observed to be emaciated, and slightly discoloured, patches appear on different parts of it, in the coloured races somewhat darker than the surrounding
skin, and in whites of a darker red or livid colour. In these succeed gradually tubular enlargements, varying from the size of a pea to that of an almond in the forehead, the cheeks, the ale nose, the lips and the lobes of the ears, with deep furrows or wrinkles separating them. These tubules are sometimes cutaneous, and at other times they have their seat in the cellular tissue. They are composed entirely when compressed, and the skin immediately covering them has usually a shining appearance. They are occasionally elevated and pointed having an appearance somewhat like unity excrescencies. The alveoli enlarge gradually from the increase of the tubules: the hairs on the eyebrows and eyelids drop out, and the voice becomes hoarse and nasal indicating the entrance of the urine to the Schröderian membrane and that lining the air tubes. Simultaneously with these symptoms or shortly after their appearance, oozy alama, exuding from the forearms and hands, and of the legs
and feet, and the skin covering these parts becomes harsh, dry, scaly, and as if cracked; and the patient complains of a sense of numbness or want of feeling. The thorax also appears tubercular, similar to those on the face, which occasionally suppures. On examining the mouth, tubercles are also frequently observed on the tongue, the inside of the cheeks, and the palate, which also reaenerally suppurate; and the uvula appears somewhat relaxed, and at times shrunken as if some part of it was podo.

As the disease progresses, the tubercles on the face also occasionally suppurate, but usually heal again, or become for a time covered with black crusts. The Schneiderian membrane often becomes affected with ulceration, there is an offensive matter from the nose and mouth; and not uncommonly as the ulceration extends the epithelium is to some extent destroyed, and one or both also hair pluck or fall in. Occasionally from continued ophthalmic inflammation of the conjunctiva the cornea becomes opaque and sight is destroyed.
The patient also suffers often from troublesome ulcerations of the extreme points of the fingers and toes, adding much to the unpleasant aspect from the mouth and nose already noticed, and rendering him an object of disgust to any one who comes near him. In this state though badly disfigured in appearance and tormented by himself and thus, the patient may live for years, suffering little from actual pain, and as far as his natural appetite is concerned still with some enjoyment of life.

In the course of time immense melphid deposits in part important to life, and then consequent disorganization take place, his arterial blood begins to fail him; he emaciates, loses his relish for food, his voice becomes more feeble and husky, the tubercle which occasionally suppurate show no disposition to heal, and his empliation is more and more undermined by the discharge from them.

And if he does not sink from mere exhaustion, he is usually cut off by inflammation of the lining membrane of the air tubes or of the substance of the lungs.
But besides the disease as described, there is another form of it affecting more particularly the extremities; from which circumstance it has been called by some \textit{"the leprous of the feet"}. It is styled by Dr. Robinson, who has given the best account of it, in the tenth volume of the Medical Chirurgical Transactions, \textit{Elephantiasis Anæsthetos}, from the insensibility by which it is more particularly characterized.

Dr. Clande considére it a mere modification of the tubercular lepromy, in which the anæsthesia and the falling off of the fingers and toes are the prominent symptoms; and Mr. Robinson himself admits that tubercular changes occasionally occur in the course of the disease. This with seem to agree that the one form may pass insensibly into the other. But the symptoms of the anæsthetic form of the disease differ so widely from the other as to demand a separate description. In it the face, generally speaking, undergoes no particular change from general swelling or tubercular enlargements, then is no falling
of the hair, the voice continues natural, and in it the disease is confined more particularly to the extremities, and followed by a gradual destruction and depopulation of the tines of the hands and feet, and emaciated deformity. It begins usually with swelling of the hands and feet, followed by the appearance upon them of patches of a light colour, shining and to some extent insensible. Such patches occasionally appear on the back of the body, and are characterized by the same insensibility. No pain attends these ulcerations, and they are not at all elevated, but usually on a level with the skin. The general health, after a time becomes impaired, the pulse slow and languid, the tongue eccentric, and the patient depressed in spirits, and disinclined for any active, mental, or bodily exertion. As the disease progresses, the skin of the extremities undergoes a marked change. It becomes dark, rough, and sometimes fissured; and ulcerations soon followed by elevation appear on the metacarpal and phalangeal bones, and
The phalanges of the fingers and toes, then spread a little but usually extend more deeply, destroying the intervening substance, the bones become affected and the fingers and toes drop off phalanx by phalanx, and sometimes also the metacarpal and metatarsal bones, the wounds usually cicatrizing for a time, after the separation of the bone. Soon from the further destruction, and separation of the bones of the hands and feet, the patient loses the power to feed himself, and can only move from place to place with extreme difficulty. Still known at the advanced stage, and as in the other form of the disease, he retains some enjoyment of life: his appetite remains good, and except at times he is tolerably free from pain; and although he cannot half he manages to keep out of his apartment, and thus to a little extent to enjoy something of the pleasure and the benefit of exercise in the open air. Gradually known from the repetition of the ulcerative process, alluded to again...
and again, and the consequent heavy
discharge, this constitution gives way,
and if not cut off by searcing or
regretting the more usual termination
of this form of the disease, he sinks
from sheer exhaustion. In the form of
Elephantiasis, the cutaneous form
experiences, when the patient suffers the
symptoms familiar with, and whilst his
suffering are consequently great, he sinks
usually more rapidly under the disease.

The same division of the disease into
Superficialis and Anaesthesiae has
been made by Dr. Danielsson and Taecke,
who in 1848 were appointed a commission
by the Icelandic Government, to examine
into the nature of the disease and determine
the course to be taken to limit its progress and
if possible to effect its cure; and their
Report, Mr. Harms Wilson, a high
authority on skin Diseases, considers the
best treatise in existence on Elephantiasis.

It is also the opinion of these Medical
Men that the Superficial form of the disease
frequently supervenes on the Anaesthesiae.
And Dr. Erasmus Wilson himself says: "That, though frequently distinct and pursuing an independent course, the symptoms of the two forms may be present in the same individual or the one may pass into the other: moreover parents afflicted with one form, may have children in whom the other form is developed."

**Pathology.**

The pathology of Elephantiasis is involved in much obscurity. It is evidently a constitutional disease, and one dependent upon some vitiated state of the blood, followed by the deposition of tubular matter in various textures of the body, and the symptom phenomena which ensued that change. Such is also the opinion of Dr. Erasmus Wilson. He says: "Elephantiasis is a blood disease, probably originating in an animal poison, and manifesting its existence, either by the deposition of a peculiar albuminous substance in the skin, membranes, subcutaneous and other connective textures of the body, or by affecting chiefly the nervous centres and nerves. This double mode of manifestation..."
of the disease has caused its division into two
kinds: Tubercular and Anaesthetic; the
former being that which is characterized by
deposition in the surace membranes of the
body, particularly the skin; the latter, which
is occasioned by deposition in around
the nervous centres and nerves. Both forms
are chronic in their course, commencing
insidiously, progressing slowly, and lasting
for years; sometimes terminating in
spontaneous cure, and sometimes in death.
He considers the natural morbid element in
elephantiasis "like a viscid albuminous
fluid, chemically composed of an excess of
albumen, a small quantity of fibrin, some
fat and salt; this fluid," he continues,
concretic into a whitish sem-opaque mass
in the tubercular form of disease, and
retains its transparency in the anaesthetic
form. Deposited in the tissues of the
affected organs, it tends, "he says, to their
disorganization — firstly by the interruption
of circulation and nutrition; and secondly
by the process of softening or desiccation."
When the disease is hereditary we trace
course that intimated state of the blood as indicated. But when the disease seems when no hereditary predisposition exists, how it is produced is mere matter of conjecture. It is just possible, that from slow absorption and the long continued use of unwholesome food, it is generated in the stomach, and carried into the blood. But still what that form itself is, or how it produces the disease we can come to no conclusion. Few have distinguished them and light upon the subject. The skin where affected has been found thickened, and the tenenacles when laid open, the latter filled with fatty tumours, or cysts containing a gelatinous fluid of a reddish colour and very generally after death, and especially in the true tubercular form, and which will also readily account for the death of the patient, the usual appearances have been found indicative of serious disease of the larynx, the bronchial tubes, and the substance of the lungs. The cause, however, of the larynx and trachea has been
describe thickened, and studded with small bleeds: and in the lungs also have been found frequently emide and cystic tubules. In the abdomen the changes of the disease are also apparent, marks of inflammation of the mucous membrane of the intestines have been observed, the accessory glands enlarged, the intestinal tubules elevated, and the Kreuttie and tubercular. All which appearances would show, a diseased action, indeed in various textures of the body, from some so yet inexplicable derived state of the blood, or as some have appropriately called it a blood poison.

**Causes.**

As to the nature of the disease, so of its causes, but little is known. It is strictly dependent, as has been already stated, on some vitiated state of the blood, and that deflected in many instances as has been clearly established, by hereditary predisposition. In many cases however it seems that no such predisposition
can be traced: and in persons whose
health were perfectly healthy, having evinced
during their lives no trace of the disease
whatever. So these we are led therefore
seek for other causes to account for its
some writers are inclined to think that the
disease is contagious: but most and among
these some of the oldest who have written
upon the subject, entertain a contrary
opinion, asserting as a positive fact that
persons have been known to exhibit as man
and wife and for many years, without the
healthy one of the parties suffering in the
least from the disease. As exciting cause
of the disease in the prejudiced, and
as what in the opinion of some may
produce it in others; when an inherent
tendency bit exists, many are enumerated.

I might mention the exposure to the
extremes of heat and cold, and the natural
interruption thereby of the functions of the
skin, one of the chief causes, to which
cutaneous disease in many forms is
described. The long continuance of
certain kinds of diet, such as fish, or
The articles likely to contaminate the blood, and are of opinion may also produce it. Whilst others arc with equal confidence are disposed to describe it, by living in a state of filth and dirtiness, and in the almost total neglect of the ablation of the body. Perhaps to account for this disease the two may be taken together; and the possibility of its originating from such causes as unwholesome food and want of proper cleanliness, seems greater, when we consider that the disease is met with much more frequently amongst those who from necessity arc obliged to live on such unwholesome food, and who have not like those in better circumstances, so easily within their reach the means of cleanliness. So climate in might also tend to accrete something in the production of the disease, recurring as it does more, more frequently, if not almost always, as later observations seem to show, in warm climates. But here again we are met with the fact, that if not so frequently disease occurs similar, if not identical
are occasionally met with in cold countries, as in the northern parts of Europe; showing that, as it occurs in hemispherically opposite climates, there must be some common cause or causes of the disease, independent of climate. In that respect it may be said, there no satisfactory conclusion can be drawn as to the cause of the disease. Indeed as to respects altogether the causes of the Disease Presipitating, Remitting, or Exciting, it must be admitted we can at best form but a very vague idea or conjecture. Dr. Copland from his observations of the disease in Africa and from other sources of information, believes, that it owes its origin principally to the use of smoked, wind-dried, and unpurified or carbid flesh meat, fish, and of carbid oils; to the use of unripe or spoiled or moldy grain: to the use of vegetable productions as articles of diet; to inattention to personal cleanliness; to the nature of the clothing: and to the contact of the matter discharged from the leprous sores, when the disease was
for advanced and when the matter came in contact with the skins of those who were already predisposed to it, by the modes of living alluded to, and by want of cleanliness.

Diagnosis.

Having already adverted to the various diseases to which the term leprosy has been applied, and shown the incorrectness of the Androcles' arrangement adopted, by different writers respecting it, classifying, as they have done under one name, diseases of perfectly opposite natures. I need add but little more under this head; there are few diseases with which Tubercular leprosy is likely to be confounded. And perhaps it may be of more advantage under the head of Diagnosis, to notice especially at greater length, the diseases which are allied to it, and the slight shades of difference between them, and afterwards those from which although resembling it, in reality does differ.

The Elephantiasis Crepiorum from The
accounts given of it, by writers of the middle ages, appears closely to have been the disease under consideration, and the one to which the term Lepra was strictly applied: and the disease described under the same name as it occurs in Iceland, the Shetland Isles, Madeira, Africa, and the East and West Indies, was evidently also closely allied to it, if not identical with it. And if the causes of differences have been observed in the diseases, as occurring in these different parts of the world, these might be most probably traced to endemic causes, and other circumstances, such as pecu-}


cular modes of living, habits of the people, etc. The Crimean Lepra, described by Dallas, Gautier, and Martin, was also evidently identical with the true Tubercular Lepra. The Lepra Anaeæsica, which was then described as a form of Elephantiasis Graecorum, affords it must be admitted in some respects, from the Tubercular Lepra. It affects the extremities, more particularly: from which circumstance
It has also been called the depency of the joints; and it is characterized especially by want of sensibility in the parts affected, and by ulcerations on the feet and hands, followed by the gradual dropping off of the fingers and toes. But I have thought fit notwithstanding to include this form of disease under the name Tubercular depency, for it is not in the first instance, or at the commencement of the disease, strictly tubercular in nature. It frequently becomes so, and assumes all the appearances in the face and other parts of the body which characterize that disease. And perhaps as Dr. Copland well observes, there are merely modified or extreme cases in which the anaesthesia and ulceration of the extremities are the prominent phenomena, and the Tubercular changes, less manifestly produced, or at a more advanced period of the malady, the anaesthesia in his opinion insensibly passing into the other. We may therefore with propriety regard it more as a modification of the
disease, then a different malady. There is a disease met with in Norway resembling the Tubercular Leprosy, but in character it has no resemblance to the Leprosy of the middle ages. This is that disease to be confounded with the "Speladsed," also occurring in Norway and which agrees with it precisely. But the disease from which especially Tubercular Leprosy needs to be distinguished is the Tubercular Veneræal affections. The Tubercles of Syphilitics are red or livid hard or developed in the substance of the Corium, not incrustable and usually consequent upon Veneræal ulcers, and not attended by the loss of hair on the parts which they affect. In this country at the present time the disease occurs but seldom. Dr. Willan says he had seen but two cases of this, and Dr. Gurney says Wilson admits that his own experience does not extend far beyond his; but although the cases which had come before him, even few in number, they had happily
embraced the leading features of both forms and had enabled him to comprehend the disease, and carry his experience into a wide field of inquiry, viz., that if the existence amongst us even now, of traces of the disorder, in a comparatively insignificient but nevertheless unmistakable shape. Two cases of recent occurrence are related hereon by the London of the 30th April 1859 of the disease in both the forms described. They occurred in Guy's Hospital. The patients were both whites and natives of the West Indies. The one case under the care of Dr. Wilks appears to have been of something of a mixed character, the tubercular form of the disease having supervened to some slight extent on the Anæsthetic, the form in which it had first appeared. That under the care of Dr. Gull, and which had existed only about sixteen months previous to the admission of the patient into the Hospital, was more strictly tubercular, but peculiar in some few aspects, and
which it may be proper to notice here.

The trunk of the body, it appears was more affected than usual, whilst at the same time sensation there was perfect.

The usual disease a matter respecting which Medical writers on this disease are much divided, and to which I shall have occasion to refer, when I describe the disease, as it occurs at the Cape of Good Hope, was at first excessive but afterwards quite lost; the feet however were not wasted.

The anaesthesia also it would appear was not permanent in any part of the body, but shifting. And theTerminal Symptom, which Dr. Adam had described as a symptom of Elephantiasis in India, and which I shall also have occasion to notice hereafter, became miserable though unattended with pain, a few weeks before the publication of the case

**Prognosis.**

Of this form of leprosy a most unfortunate
The prognosis must ever be joined. Notwithstanding the great variety of remedies that have been employed from time to time, in the treatment of the disease, its may still be regarded as incurable, and be classed with propriety amongst "the Aporia medicae." Its progress generally speaking is slow and small. Many may die by not to stand it; and the unfortunate subject of it, may linger under it for many years, and even with considerable enjoyment of life. In the early stage, some little impression may be made upon it by medicine; but then the effects are too often very transient, and the disease soon returns with still greater severity. It is true it may be confined to the skin and the superficial tissues, or more particularly; but ultimately it implicates textures of more importance to life. The mucous membrane of the air passages or the substance of the lungs, or the lining membrane of the intestines, and the glands embedded in it, and gradually under its ravages, in their important
parts and in spite of the Physicians' best efforts, the patient gradually sinks.

**Treatment**

This may be said to comprehend almost all the remedies employed for the cure of cutaneous diseases generally. All have been tried, but it would appear, except in the early stage of the disease, with but little benefit. That the disease however is curable in the commencement, is the opinion of some, and amongst others of Dr. Copland, who himself had opportunities of seeing the disease in different parts of Africa, although not as he is candid enough to admit of observing the effects of treatment, in the advanced stage of the disease however, little is to be expected from medicine. Dr. Buller states justly as to the result of his experience, "confirmata elephantiae non curatur", a sentiment which most perhaps who have had opportunities of treating the disease would readily adopt. In attempting the cure
of the disease however, it is scarcely necessary to observe that every cause, exposed to have an effect in producing the disease, such as unwholesome food or diet, poor living, want of proper cleanliness should be avoided, and there be substituted instead, good wholesome and nourishing food, the use of warm baths and regular exercise. As to therapeutical means the animal, the mineral and the vegetable kingdoms may be said to have been consulted. By some the Chloride of Mercury and the Arsenic in combination with Tartar emetic have been highly entailed, whilst others relying more upon Antimony, as a curative means have given it as their opinion, that Mercury is positively injurious.

In large doses all seem to agree that it aggravates the disease. Arsenic has also been strongly recommended in India. But Dr. Anstie who practiced many years in that country, was surprised at the use of it, and found more benefit from small doses of Mercury for a time with the use
of warm baths simultaneously, and afterwards following up with a course of mineral acids. But of all the remedies he employed, he says he found none so efficacious as alternatives and dress-ements, as the milky juice of the Asclepias gigantea, given along with sulphur. In one case of the anaesthetic form of the disease, when all other remedies had failed, Stephenson employed with success the Chlorate of Potash in decoction of Bark, followed up with the Solude of Potassium with Ipecac Potass, in the compound decoction of Sintapilla. And Monsieur Biett of Paris, in a patient in the advanced stage of the disease when as in Dr. Stephenson's case, many powerful and energetic means had been tried in vain, or at least with no permanent benefit, stated that he was much improved by being restricted to a milk diet, and Medigenson's drinks, along with small doses of Opium, and baths to allay retention. Various other remedies have
been used. I might mention by Sir Astley
of London, Park and the medical tonics:
by Dr. Thirring of Turin, stimulant
bath, and spirits, friction,
probably under the impression that the
disease was connected with deficient
vitality or imperfect circulation of the
affected parts. And Dr. Ruge from having
found that the subsidence of individual
tubercles was generally preceded by a
degree of inflammation, ingeniously enough
proposed to excite inflammation in the
skin in the affected part by the application
of ammonium nitrate, spirit of
ethanoles etc. Strychnine has also been
strongly recommended, and used with
benefit! About eight years ago an account
of the employment of the juice of the Vera
ieislieneis (sceacon) was transmitted to the
French Government, from one of the French
embassy in Brazil. It had been used with some
benefit, but as the disease is prone to return it
proved the confirmation of time. But in
conclusion it may be said, that for the cure of this
disease the appropriate remedies are yet to be discovered.
ON
Leprosy as it prevails at the Cape of Good Hope.

Leprosy, as it occurs at the Cape of Good Hope, it would appear corresponds precisely with that disease as described in the preceding pages: and is met with in the two forms of Elephantiasis Intercalaris and Elephantiasis Anaesthetica. It is not generally preceded by any particular premonitory symptoms; and alteration is seldom directed to it, either by the patient himself or his friends until there appears a marked change in his countenance, remarkable especially in its breadth and dependent upon Intercalar enlargement, with a slight change in the colour of the skin immediately covering them, in white of a dark red or purplish hue, and in flakes of a colour somewhat darker than the natural colour of the skin. These flakes are met with in various parts of the face, but more particularly on the forehead, cheeks
Also Vare, and the lobes of the ears, and as they increase are separated from each other by deep furrows. They are sometimes elevated and fronted as in Bateman’s Plate of Elephants, but more generally they are soft, round, and circular, and elevated but little above the level of the surrounding skin.

The Eyelids from the same cause, under the deposit become more particularly prominent and the hairs gradually drop off from them.

The Eyelashes also fall off, and the hair on other parts of the body with the exception of the Scalp, where it is usually retained, and early in the disease the countenance altogether assumes a peculiarly ugly and hideous appearance. Changes somewhat similar occur also on the forearm and hands, and on the legs and feet, and the skin covering these parts becomes harsh, dry, and somewhat crumible, the tubercles on these occasionally suppurating and healing again. The hands posteriorly appear gnarled and wrinkled, and in white places the skin covering them is of a reddish colour, whilst the palms
are usually dry and shrivelled. The fingers are thickened, impeding some slight extent their movements; they are usually partially bent, sometimes permanently contracted; and the sense of touch is materially blunted. The nose becomes hoarse and nasal, and on inspecting the mouth small tubercles are also occasionally observed on the inside of the cheeks, at the root of the tongue, and on the fauces. The nose becomes large and ovoid-shapes, the lining membrane not infrequently ulcerates, and at times, by the process of ulceration, the septum is destroyed and considerable deformity the consequence. From it as also from the mouth, as the disease progresses, there is usually a most unpleasant fetor. The trunks of the body is seldom affected, even in advanced disease, the cases of it as far as outward observation is concerned being confined more particularly to the face and extremities. In the mucous membrane of the air passages, as shown in an early stage of the disease by the hoarse and nasal voice, the moles...
Deposits produce important changes: these seem still more serious: the membranes themselves become disorganized, they soften and ulcerate, the patient's voice becomes more and more juble and husky, if it be not lost altogether, his strength becomes more and more undermined and so death puts an end to his protracted sufferings.

With regard to the Semoral Tumor which Dr. Adams first drew attention to, as found in patients suffering from Elephantiasis in Africa and which Dr. Kinns also found as a symptom of the disease, as it occurs at the Mauritius: from the information which I have received, it does not appear to be a usual concomitant of the disease as it occurs at the Cape. Dr. Minto the Medical Superintendent of the Seper Institution there is of opinion and my father himself on the occasion of a visit which he made to the Institution on the 27th of July 1858, and which I may believe is on an island in the mouth of Tett Bay about eight miles from Cape Town, could only learn from a few
of the patients, that they occasionally suffered from such a symptom, and that the swelling usually disappeared again of itself; and as those patients who had observed the appearance of such a swelling, occasionally, even upon suffering from the anaesthetic form of the disease, he was disposed to conclude, that it was a symptom only occurring occasionally in the case of ulcerations in the foot, and from unhealthful matter absorbed, existing inflammation in the glands of the groin, in passing through them.

Another symptom respecting which medical writers on leprosy are still divided is the loss of insensitivity, some asserting that it is a peculiarity of the disease, whilst others entertain the opposite opinion, and are inclined to think that the dural powers of the body are impaired. The truth will be found to lie perhaps between the two opinions. The disease it would appear, seldom occurs under the age of puberty, and thus few opportunities are afforded of discovering
the truth of what has been asserted, that the evolution of the genital organs is retarded by the poison of delay. But that lepers possess the ordinary sexual desires, and may propagate their species, is a well accustomed fact at the Cape, from the very circumstance of the disease being in many instances hereditary.

Dr. Bentinck states, however, in reply to the opinion, that lepers have unusually strong sexual desires, an opinion it may be supposed well grounded, although from intercourse between the sexes being strictly prohibited, it ought to supersede the credulity had but ten opportunities of coming to a correct conclusion on the subject.

The anaesthetic form of the disease, affecting the extremities, commences generally very insidiously, and without any thing particular to excite the fears of the subject of it, or to induce him to seek medical advice until the peculiar numbness or insensibility of the parts affected which characterizes the disease presents itself.
It is common more generally preceded by acute pain in the course of the nerves of the limb affected, dependent most probably on inflammation of the nerves or the medullary (the result of some mobile deposit); and the changes of structure which follow that inflammation, as interrupting the supply of nervous energy, will probably account satisfactorily for the anaesthesia, the pathognomonic symptom of the disease.

The disease may commence in one arm or one leg, but the two are most commonly simultaneously affected. The anaesthesia at first usually affects only certain parts as for instance one or two of the fingers or toes; or it may occur more extensively, in pitch on the hand or foot, or the face arm or leg and which are generally circumcised. In these symptoms commence a marked change in the appearance of the hands; they become puffed, and the lower phalanges of the fingers are also permanently placed. At this stage of the disease also, if both arms or legs are not affected, on inspection atrophy
of the muscles to some extent, will be apparent in the diseased limb, accounted for like the Anaesthesia, from the diminished supply of nervous energy. In this state the disease may be for a time stationary; but soon bullae or vesicles appear on the Metacarpal or Metatarsal bones, or the phalanges of the fingers or toes. These burst discharging a darkish fluid, and either heal or are covered for a time by a crust or scab. More generally however ulceration follows the opening of these vesicles or the falling off of the scales developing gradually deeper exposing the bones and giving rise to their destruction and their gradual separation. And what is remarkable, notwithstanding the falling off of the lower phalanges and the hands and feet the lower end of the adjoining phalanges becomes eroded by a nail of the vestige of one in all probability a new formation; and as the bones drop off one by one a perfect excrution follows, and for a time the disease seems arrested. Gradually however the same process is
united: Ballis again appear, followed by
vulvitation, and the death and separation
of the highe phlegmes, or it may be of
the cutaneous or cutaneous form.
Until at last the patient if not cut off
by phlegmes, or dysentery, not unfrequency
termination of the disease, emaciated
daily and sinks at last from sheer
exhaustion.
The two forms of the disease described,
although a contrary opinion has been
expressed by some, are occasionally
found combined in the same person.
On the occasion of my father's visit to
the leper institution amongst the patients
whilst he examined he saw two, where
both the tubercular and anaesthetic
characters were well marked, the
former having in both cases enpusted
upon the latter. One was a
student of his named Abram; he appeared
to be about 25 years of age and had
been a patient in the institution for a
period of six years. His face was
studded with tubercular enlargements.
His eyebrows were prominent and bare; and the Eyelashes were partially gone. The
lips of his face were also thickened and
eroded from Intraocular deposit. His voice
was hoarse. But on examination of the
mouth nothing unusual was observed. Both
legs before the knee were swollen, pusty and showed marks of recent
ulceration. In the left foot the lower
phalange of the first toe was gone, and
on the right the lower phalange of the
little toe. In the right hand all
the lower phalanges of the fingers were
gone: and in the left the lower phalange
of the middle finger. He derived he said
began in the extremities some years ago,
and it was only very recently that his face
had become affected with Ulcers.

In the case was that of a Hollentot
woman, by name Kaatje, and apparently
about 36-38 years of age. In the rest of
the constitution, she has been the subject
of tribesing for a period of six years;
but she had only been in the Institution
about one year. Her face was
enlarged and tuberculated: her nose flattened and mis-shapen, and with a deep furrow or wrinkle across it, as if the septum has been partly destroyed. She was en also tuberculated: and the hairs on the eyebrows, which were prominent, and the eyelashes were gone; her voice was hoarse and nasal; the breath offensive; and on looking into her mouth the tongue was relaxed, and there were several small tubercles at the root of the tongue. Along the fore arms were many tubercles and marks of extensive ulcerations. Both hands were swollen, thickened, and cracked, and particularly on and insensitive. In the right hand the thumb was permanently flexed and thickened, the two lower phalanges of the first, the ring, and little finger were gone, and the middle finger in which all the phalanges were perfect, was permanently flexed. In the left hand she had lost the little finger and two phalanges of the joint and middle fingers, the lower end of the remaining phalanges on each
In both feet, which were swollen and thickened all the toes were gone. She
desire she stated began first in her
foot about six years ago, then in her
hands and only lately comparatively,
although she could not recollect the
precise time in her face. She had
had two children: four were still living
and escaped as yet no symptoms of disease.
The youngest about a year old was still
at the breast, having been born shortly
before she came to the Institution.
These two cases have given me, I believe,
prove I conceive what I have stated,
that both forms of the disease may
exist in one and the same person.
And Dr. Minto in a report with which
I have been kindly favored 23d
August 1858 states that of the total
number of patients in the Institution at
that date, namely fifty four, no
less than eight showed symptoms
of both forms of the disease.
With regard to the period of life at which the disease commences, although it does occur occasionally under the age of puberty, it has been estimated including such as have a hereditary predisposition to it from the age of eighteen to thirty-five. It occurs however occasionally at both earlier and later periods of life.

The following is a return of the ages of the lepers in the General Infirmary, Hobbin Island, on the 33rd August 1858.

<table>
<thead>
<tr>
<th></th>
<th>under 20</th>
<th>20 to under 30</th>
<th>30 to under 40</th>
<th>40 to under 50</th>
<th>50 to under 60</th>
<th>60 to under 70</th>
<th>Above 70</th>
<th>Ages</th>
<th>Total number of patients</th>
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<tbody>
<tr>
<td><strong>Males</strong></td>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>34</td>
<td>37</td>
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<tr>
<td><strong>Females</strong></td>
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<td>2</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>40</td>
<td>17</td>
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<tr>
<td><strong>Total</strong></td>
<td>5</td>
<td>13</td>
<td>21</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>54</td>
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J. C. Minto, Surgeon.
Causes.

At the Cape, Elephantiasis is endemic, but as in other parts of the world where it occurs, the local cause or causes upon which it is dependent are still unknown. We would naturally be led to trace it in connexion with climate, the habits of the people, or their mode of living; but as it respects all these we can find nothing satisfactory to account for it. Diseases similar or identical occurring in perfectly opposite climates we can attribute to climatic or local agency to which to attribute it. and as it respects the habits of the people or their mode of living, if the disease were confined to any particular class of people, say the rich or the poor, we might in endeavoring to trace a cause for it, decide it in the one instance to luxurious living and sedentary habits and in the other to unwholesome diet and the habitual want of cleanliness. But such is not the case. It is true
that in that part of the world, as the reports of the Repeal Institution from time to time clearly show, the disease occurs more frequently amongst the poor and lower classes than amongst the rich; and in the former perhaps unnecessarily. Food and the neglect of cleanliness may do much to aggravate the disease. But attacking as it does all classes of the community, the European, the native of European extraction, the negro, and the Asiatic, there must be some common cause, spontaneous or local cause to which to trace it. At the present time my father has under his care a case of a white woman whom the disease first appeared on Psoriasis affecting various parts of the body and from which she had suffered for years; as the latter disease began gradually to disappear, internal treatment succeeded, and she is now suffering from that disease much less than before. That the disease is hereditary is a well ascertained fact, and to this relation may have been the
original cause of it, is to be traced to the comparative scarcity of the disease of late years, than at earlier periods of the history of the Cape. In children of lepers are usually born healthy, and they seldom suffer any symptoms of the disease inherited, within the age of puberty, and often until a much later period of life: whilst some escape entirely, the disease passing on one generation to appear as occasionally happens in the succeeding with increasing intensity. With regard to the contagious nature of the disease, such an opinion at the Cape at least is no longer entertained. The fallacy of it has long since been established. Means have been known to be used under the same roof to eat at the same table, and as man and wife, to inhabit together for years, without contracting the disease, or coming in after life, the slightest symptoms of it.

It is true means are adopted here by the Government to make separate provision for lepers, as in other parts of the world; but such provision is
Made not to prevent the spread of the disease by contagion, but that there may be a home for the subjects of this loathsome disease, and to prevent its extension, as far as possible, by hereditary transmission.

**Races.**

It is also an interesting subject of enquiry, and one which is hunting on the subject of leprosy, it may be expected I should touch upon, especially as the inhabitants of the Cape of Good Hope comprise many races, whether or not the disease prevails amongst any class in particular. That the disease is endemic at the Cape of Good Hope, would appear from the circumstance that it having had the attention of the Dutch Government directed to it at an early period of the history of the Colony: and from what observations show at the present time, that it prevails more generally amongst the Aborigines of the Colony. This seems to be borne out by facts and the experience of the medical men.
of the country. But though men generally met with
amongst them, it is by no means confined to them.
It occurs also amongst the Blacks or Kafirs and
the coloured generally called Africans, the
descendants of the former slaves; and amongst
the inhabitants of European extraction, though
certainly amongst them much more seldom. And
occasionally though very rarely it is met with in
Europeans. My father during his long residence
at the Cape only met with two or three cases
when Europeans were attacked with the disease.
The following is a statement also kindly furnished
by Dr. Pinto, of the different races, the subjects
of the disease in the Institution on Rothon
Island on the 23rd August 1858.

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<tr>
<th></th>
<th>Men</th>
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<th>Women</th>
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<tbody>
<tr>
<td></td>
<td>White</td>
<td>Black</td>
<td>Negroes</td>
<td>Africans</td>
<td>White</td>
<td>Black</td>
<td>Negroes</td>
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In this statement in forming an opinion on
the subject some might may be attached.
But I think it necessary to state, that it can
clearly be considered as a correct criterion of
the extent to which the disease prevails,
amongst the different classes of the Inhabitants,
in as much as those who have the means
themselves, or who are at all respectably
connected, and whose relative are able to
assist them, are generally accommodated
if not under the care of their immediate
friends, in some secluded or retired situation
on the main land. And it is perhaps the
only the really poor, and those whose friends,
from their dread of the disease, regarding
it as contagious, and from the southern
character, are afraid to retain them with
them in their homes, who are sent to
the Institution on Pollok Island. This
statement would also show, and which
observation seems to confirm that the
disease is more prevalent amongst men
than women: but it can scarcely be
received as a certain proof to that effect
when it is considered, that the relatives
and friends of lepers would at all times
be more reluctant to send females than
Male Black an establishment. Stedt's 
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John have already referred to having procured an account of this disease, as it prevails in the island of Jamaica, observes that it is found there in the largest proportion amongst the Hebrew population, arising as he thinks from some innate tendency to the disease in that race. But at the Cape that statement does not seem to be borne out. There are it would appear many Jews residing there, but from the information which have received, the disease at the present time seems to be unknown amongst them.

**Treatment.**

As curative means, a great variety of remedies has been employed at the Cape. Swims in salt sea baths, medicated baths of various kinds, mercury in a mild form in combination with antimony, and also carried to physicalism the arsenical baths, and the preparation of iodine. All these have been used by the medical practitioners of the country, but with no permanent
benefit. Of all the means employed however, the last perhaps has been found the most efficacious in the form of Gentiana; and in combination with Mercury and Arsenic as in common expectation, by the use of these in the early stage of the disease sometimes a marked impression has been made upon it. The submaxillary enlargements in the face, and other parts of the body have subsided and so favourable has the change altogether been, that the Medical Attendant has been flattered that the disease was actually giving way. But therein he was doomed to disappointment: for no sooner has the medicine been discontinued than a change for the worse has taken place. The disease has gradually progressed, and sooner or later the patient has succumbed under it. But besides these many other remedies have also been used: the Liquor Nitricus, the Lecithin of Gallipot, with the Billiards of Mercury, the Lodoside of Potassium etc. But like the others all with doubtful success. Nor must I omit mentioning the Hydrosulphuret Acetate which
it is said, has been used with great effect in the disease. So it a fair trial was given in the form of deception by Dechend's predecessor, Dr. Borthwick, for many months and in both forms of the disease, but without any benefit whatever.

In that it would appear, that at the Cape to the present time as in China, at the present time as in other parts of the world, leprosy as it occurs there, is still an incurable disease, and one which has hitherto, and continues still to baffle the skill of the Physician.

In further illustration of the subject are appended three Plates, two containing sketches of lepers suffering from the tubercular form of the disease, taken from Photographic likenesses of Patients in the Pott's Island Institution, with short notes of their cases; and one intended to show the stages of the disease in the anaesthetic form in the extremities, also, with a short account of the case to which it refers. The patients were all persons of colour.
Plate I.

Figure 1. John Roberts, a man who has been suffering from the disease for a period of nine years. Age unknown. The whole face wrinkled and studded with tubercles. The nose enlarged and flattened; the lips swollen, and several of the tubercles on them and on the chin in a state of ulceration. Hands swollen and numb. Voice hoarse and nasal.

Figure 2. Andrews Woobley, has been laboring under the disease eleven years. Forehead, cheeks, and lips studded with tubercles, and the face altogether greatly wrinkled and disfigured. Hair of the eyebrows and eyelashes gone. Hands swollen, rough, and scaly, and particularly numb. Voice hoarse and nasal.
Figure 3: Bella Klasse, a woman apparently advanced in years. Has been the object of the disease for four years. Forehead, nose, lips and ears covered with tubercles. The nose flattened and the tubercles on its large and elevated. The hairs of the eyebrows and eyelashes gone. Eyes enliven from the enlargements in the palpebras and the eyebrows. Hands and feet swollen and numbed, and the skin covering them hard and leathery. In the course of the disease are also several tubercles of a slightly reddish or livid colour. Feet not much swelled, but as with the hands, the skin covering them rough, dry and leathery.

Figure 4: Elizabeth Kamper 18 years of age has suffered from the disease three years. Forehead wrinkled and studded with tubercles. There are also tubercular enlargements on the cheeks, nose, lips and ears. The nose itself enlarged, and the lips swollen. Tubercles also in the course of both
Fingers, hands swelled and numb, and ring and little finger of right hand contracted. Feet swollen and skin covering them rough, hard and fissured.

Plate III.

In this plate by the letters A. and B. are represented the hands, and C. and D. the foot of a woman, named Antoniette Platges. She is 54 years of age. How long she had suffered from the disease is uncertain: but she had been a patient in the Institution 14 years, at the time of my Father's visit to it. The fingers in both hands are gone, and the stump appears, as though they had been amputated. On the right hand there is an ulcer exposing the bone ends of the metacarpal bones of the ring and little fingers. In the left foot all the toes are gone, except the great toe, and it has an appearance as though partially dislocated. On the sole and
on the Metatarsal bone of the great toe, is a foul, spreading sore. Right foot more natural in appearance, but the toes all good, except the great toe and joint phalange of the joint toe. There is also on it a dirty looking ulcer on the Metatarsal bone of the great toe.