A Thesis on Syphilis
Its Course and Treatment.

Syphilis presents a peculiar interest, both from a medical and social point of view, and has for the last three centuries, attracted the attention of men of the greatest eminence. At first everyone was struck with the severity of the complaint, which made its appearance in Europe in the shape of a sudden epidemic in 1495.

By degrees the nature, course, and mode of propagation of the disease were carefully studied, distinctions were made, and settled modes of treatment introduced.

Whether the epidemic of 1495 was the first appearance of Syphilis in Europe or not, is a disputed point, some asserting that Syphilis existed in Europe from the earliest times, but that the severity of the epidemic in 1495 caused it to be regarded as a new disease.

Syphilis was a disease of great antiquity in China and India. Dr. Mac. Glavan writing on the subject (Janet July 20th 1833) states, that Syphilis was unknown in China, that is in the northern parts, till about the middle of the 9th century of our era, when it came from Canton and extended over the empire.
He surmises that Arab traders conveyed the poison as well as its mercurial antidote to Europe, and that the appearance of Syphilis in Europe late in the 15th century, is due to that agency.

Other authors maintain that the introduction of Syphilis into Europe, coincides with the discovery of America by Columbus. The probability is, that though Syphilis was prevalent in Europe before that time, a severe form was then introduced, which spread with great rapidity.

Syphilis was a disease extremely prevalent in Hispaniola, and many of the soldiers of Columbus seem to have been suffering from it on their return to Europe. The spreading of the infection in Europe was favourably by the fact, that some of these soldiers were present in the Spanish army that helped the Neapolitans to defend Naples against the French. These soldiers spread the disease among the camp followers, and as towns were taken and retaken during the war, both the French and the Neapolitan nations became infected with the disease. This seems to be the most probable supposition, and that at this time, a severe variety, at any rate, was introduced into Europe.
Whether their Syphilis came into Europe from America, or by more hidden routes from the East, it found a new soil which increased its vigour and the severity of that epidemic has never been equalled, although Syphilis is still extremely prevalent.

We may say at any rate, that the description of Syphilis dates from the end of the fifteenth century.

The study of Venereal Diseases was for a long time largely influenced, and is influenced to this day, to no small degree, by the writings of John Hunter. Hunter describes that form of Venereal disease which is characterized by indolent induration and which bears his name, but he does not say much about that other and more frequent sore, which must often have come under his notice, and in which induration is more or less absent. He upheld the doctrine then taught as to the identity of Gonorrhoea and Syphilis and himself taught that the difference between the diseases depended on the nature of the surface to which the poison was applied.

To prove this he inoculated himself on the glans and prepuce with matter from a Gonorrhoea, and the result was the development of a primary sore. 

James P. Lane, Lancet Dec 1876

Harveian Lecture

Ricord some years later explained
this, by the hypothesis of a concealed urethral chancre. Another and more probable cause is now known, namely, that the morbid excretions and blood of persons suffering from Syphilis in its secondary forms, produce Syphilis on inoculation.

Even as late as 1833, Dr Wallace of Dublin again described Gonorrhoea as a variety of Syphilis. Piccard in his work published in 1838 finally disproved this. He gives the result of a large number of inoculations with Gonorrhoeal matter in none of which was any result produced.

There are then two kinds of sore or chancre

1. The Common Soft Chancre

2. The Indurated Chancre.

The chief characteristic of the Soft Chancre is, that there is no period of incubation to speak of. Two or three days after infection a red spot forms which becomes a vesicle, then a pustule, and finally discharges leaving an excavated ulcer, which has a grey surface and a red edge. There is no spreading hardness; though its base may be thickened by inflammation of the tissues under it, but this hardness is different to the hardness of the true Hunterian or Hard Chancre.

These chancre are frequently multiple, and may be followed by a suffocating Bubo.
In the true Hard Hunterian chancre, there is a period of incubation, which lasts usually ten or twelve days, but it may only last three days, while on the other hand it may last six weeks. The chancre then appears, there may be some slight itching at the part, then redness, and then a small vesicle forms which soon cracks, and induration shows itself at the base of the crack.

This "Hardness" or induration, is usually characteristic of the Hunterian chancre, as it abruptly ceases when the healthy tissue begins, while in the soft variety of chancre, the hardness being due to infiltration of lymph from inflammation of the cellular tissue, it fades away gradually in the healthy tissue and the border is not regularly marked out or sharply defined.

Hard chancre is usually single, and if there be more than one, they are probably of the same date. The primary lesion may not be noticed, as it may occur anywhere, on the hand, finger, or lip. The scar, following the Hard sore when healed, is not usually so marked as the scar following the Soft sore. Usually the best marked venereal scars are caused by large sores of simple origin.

Inflammation of the Lymphatic Glands follows the Hunterian Hard sore, and
usually within three weeks, there is a chain of hard glands in the groin, that is if the chancre were situated in their neighbourhood. These glands are not as a rule painful. The hard chancre usually affects several glands, while the soft chancre may often cause a suppurating Bubo in a single gland.

**Situation of the Infecting Sore or "Hard Chancre"**

Miss Bertha Hill and Arthur Cooper in the 2nd edition of "Syphilis and Local Contagious Disorders" say, (page 84) "The superficial hard ulcer, or erosion, is the most common form of initial lesion, a favourite locality for it, is the inner surface of the foreskin. On page 87 Mr. Hill says, out of the cases seen by himself at the lock hospital in 1861, there were 41 lesions of the foreskin, 31 of the inner prepuce, 24 of the entire prepuce, 12 on the glans penis, and 10 at urethral meatus.

Drumstead and Taylor in their work on "The Pathology and Treatment of Venereal Diseases" say, (page 144) "The superficial form of chancre, i.e., the indurated chancre, is most marked on the internal surface of the prepuce, by which it is protected from the air and friction, and kept free from scabs, and it is in this situation that it is most frequently met with."
Mr. Barton of Dublin in his lecture on "The Pathology and Treatment of Syphilis" says, "the situation of the sore affects the amount of induration very much, thus on the glans it is well marked, while if occurring on the Prepuce it is often indistinct.


Cloe's figures. Internal surface of Prepuce 63.
Balano-preputial fold 171. Orifice of the Prepuce 35.
Cutaneous surface of the Penis or Prepuce 58.
Total 394.

Preputial furrow 60. Multiple, that is shoring chance of the Furrow and Prepuce. 02 of the Furrow and Glans 11. Meatus Urinarius 32.

The larger proportion of chancres were thus found to be on the Prepuce, and the majority of these were situated on the Inner-Prepuce, comparatively few being on the outer.

The situation is usually determined by circumstances. Many of these seen on the
Preface and Furrow, Preface Furrow and Frenum were probably at first situated on the Inner-Prepuce, and extended to adjacent parts before being seen.

Modes of Infection of Syphilis

Mr. Hutchinson has tried to prove that there are three modes of Infection, characterized each of them by special features,

(Med. Journal. Vol 53. 1876) namely,

1. Acquired Syphilis, the first and common form.

2. Inherited Syphilis, or that form which the disease exhibits in infants and is derived from one or both parents.

3. A new form, peculiar to the mother, and derived by her, not as in the first of these three directly from the father, but by fetal blood infection or at least through conception.

Is the disease however transmitted in its entirety?

Dr. Robert J. Lee, speaking on this point in his lecture on Infantile Syphilis (Lancet June 1884) considers that facts point just as strongly to the disease being transmitted in different degrees, as in its entirety. He considers it possible for the virus to produce a partial effect on the Human System, and that it need not follow out in its course all the effects which we are accustomed to
associate with the idea of entirety.

As regards infection of the mother through the foetus, he considers it to be well ascertained
that if conception take place at a period
when the father, though recovered from local
symptoms is suffering from the secondary rash,
the mother will exhibit more or less well marked
symptoms of infection which will closely
resemble, if they are not identically the same,
as the secondary symptoms present in the father.
This however is difficult to prove, as the
probability of a man marrying while he is
suffering from secondary symptoms is slight,
and it is therefore difficult to obtain complete
cases.

There is I think no doubt that a sore attended
with indolent painless induration, and similar
multiple enlargement of the neighbouring
lymphatic glands, will be usually of the
infecting character, but is it equally certain
that the so-called suppurating sore is never
followed by a like result.

There are two principal theories with regard
to the relations existing between the Hard
and Soft sores.

These may be described as the Unity Theory
and the Duality Theory.
The Unity Theory teaches that the Hard and Soft sores are the product of one and the self same virus. That the constitutional infective property of the Soft sore is perhaps less than that of the Hard sore, but that the Soft sore may under favourable circumstances, and on a suitable soil, produce constitutional effects.

The Duality Theory teaches that there are two varieties of Sores or Chancres, the Soft and the Hard. The Soft variety runs an acute course, its edges and base are soft, and its effects are local only, and it does not infect the system.

The Hard variety is chronic in its course, has indurated edges and base and is invariably followed by symptoms of constitutional infection. In fact that there are two kinds of poison both producing results but incapable of transmutation or alliance.

Mr. Jonathan Hutchinson in his address delivered before the Pathological Society in 1876 gave it as his opinion that "Dualism was dead, even in its most restricted form, as implying that there are two different kinds of virus both capable of producing a Chancre."
He attributes the soft chancre to contagion with the inflammatory products of syphilis, though not usually containing its germs. In a clinical lecture he delivered in 1875, (Lancet Sept. 1875) he had previously stated his belief, that the worse the soft sore was, and the greater and the deeper the ulceration, the greater the chance the patient had of throwing off the specific virus.
He also thought that it would not be a bad plan, to avoid all errors of diagnosis, by treating all chancres as if they were syphilitic, and he especially cautions medical men against giving an opinion as to whether a patient is suffering from syphilis or not, when he first presents himself with a chancre.
Also, that if soft chancres could be exterminated, and if all secretions capable of producing them were destroyed, that we must expect in a few months to see them reproduced.
But that if, on the other hand, all hard chancres could be destroyed, and all the specific germs of syphilis, that there would be no reproduction of the disease, meaning by this, that though the soft sore cannot produce syphilis, yet that the germs of syphilis cause
The inflammatory action, that produces the Pus, which causes the Soft sore.

Mr. Charles Maurice on the other hand, considers that the Vires of the Soft sore is always derived from some person who has an ulcer of the same description, and that the Vires of the Soft sore is constituted by Pus, sometimes by blood, and the organic debris which result from the melting down, or gangrene of the tissues, that the contagious matter probably adheres to the Pus globules, and is constituted by them. (Red Cross, Sept. 85)

Page 227.

Mr. Lane when delivering the Harveian Lectures on Syphilis in 1876, quotes from the Blue Book containing the evidence taken by the commissioners appointed by the Admiralty in 1865.

The Committee reported that "Twenty nine experienced witnesses gave evidence that sores, both "Soft" and "Hard", may be followed by every variety of Syphilitic eruption."

But this again was partially refuted by others, who stated that in their opinion, the sores had not been examined with sufficient care, and that the induration of the "Hard" and "Soft" sores had been mistaken one for the other. That there
had in fact been errors in Diagnosis. Mr. Lane then suggests, that as there is so much difficulty in the Diagnosis, between the Soft and Hard Sores, that they are the product of the same Virus, only that the infective property is materially lessened. He quotes Clerc's view, that the "Soft" sore is the result of Syphilitic infection, on an individual already constitutionally infected with Syphilis; but surely the number of people with "Soft" sores that we meet with precludes this argument, they cannot all have been infected with Syphilis and then have contracted this milder form a second time.

Mr. de Méric in the Discussion on Syphilis at the Pathological Society in 1876, gives a quotation from Lancerneau, who states, that whereas Soft sores have been known throughout all ages, the Hard sore and its constitutional effects, only made its appearance towards the close of the 15th century.

The value of this argument, depends on whether Syphilis was introduced de novo into Europe at that time, or not.
The supporters of the Unity Theory then declare that every chancre, whether its base be soft or hard, is connected with syphilis, and that the inflammation, ulceration, and destruction of tissue that is set up in the case of the soft sore, or chancre, usually prevents general infection, but that the Hard chancre, being of a more chronic nature, gradually infects the blood, without setting up these acute inflammatory symptoms.

The supporters of the Duality Theory allow that the soft sore is, in rare cases, the means of conveying the syphilitic virus though it does not give rise to it, but that the presence of specific virus may be occasionally masked by the condition of the ulcer. That the soft sore is merely a local affection, and that it only, as a rule leads to suppuration of the inguinal glands, though it may (rarely) be followed by secondary manifestations.

Taking these different arguments into consideration, and from my own observation of cases which have come under my notice, I am inclined to believe that there is one true Hard Hunterian chancre, and there is usually only one, and if
there be more than one, they are all of the same date.

That the true hard chancre is not inoculable on the same individual as long as he is suffering from the disease, but that when he is cured, he is liable to a fresh attack, should he put himself in the way of it.

That the soft uninfiltrated sore, or chancre is the more common of the two, and is an entirely local disease, and does not infect the system. That this soft sore may be contracted any number of times, and is always inoculable on any person, whether they have had syphilis or not, or even if they are still under its influence.

Whether the theory of the Duality of the poisons is a correct one or not, must surely always be a matter of great interest and importance, if it ever come to pass that this question is finally set at rest.

Mr Carmichael promulgated a theory in 1881 suggesting the probability of there being a plurality of poisons. This theory however did not stand testing.
Pneumonitic Symptoms of the "Secondary Stage."

Secondary manifestations may appear in the second or third week after contagion, but the general rule is about the sixth week, and it frequently occurs that they do not appear till the third month.

The complexion begins to alter, and the skin loses its natural brilliancy, and the eye gets dim. The patient loses all bodily and mental vigour, and becomes low spirited and inactive. The hair becomes dry, and loses its gloss. Giddiness and headache set in, and there is great uneasiness about the neck, and a peculiar supra-orbital pain.

The head symptoms usually begin in the evening and leave off in the morning, the recumbent position and the warmth of bed increasing them greatly. The supra-orbital region is the part usually affected by these pains, which are often very severe. There is no heat or redness about the affected part, nor is it tender on pressure.

The pains are sometimes confined to one side of the head, and simulate Hemicrania, or Intermittent Neuralgia.

Subtential pains then come on, and a feeling of uneasiness about the joints, with great lassitude in the limbs.
These pains do not produce any redness or swelling, neither are they increased by pressure. The posterior cervical glands then begin to get involved, those which lie on a level with the Mastoid Process being the most useful as a means of Diagnosis.

Secondary Syphilitic Eruptions.

Mr Alfred Gangster in his Clinical lecture on "Secondary Syphilitic eruptions gives a good classification of their different forms.
(Lancet Dec 1st 1883)

I
Circumscribed hyperaemia, with but slight infiltration

Macular Syphilide

II
Marked Infiltration of the Papillary Body

Lenticulo-papular Syphilide

1. Squamous
2. Moist Condyloma
3. Early Carcinome

III
1. Military Papular Syphilide (Infiltration)
2. Military Vesicular Syphilide (Erosion)
3. Military Vesicular Syphilide (Suppuration)
4. Acne-form Syphilide
IV
Infiltartion with sub-epithelial suppuration,
and superficial ulceration.

1. Varielliform or Varioli-form Syphilide
2. Erythematous Syphilide (superficial)
3. Erythematous Syphilide (Deep)
4. Lupus.

V.
Gummatous Infiltartion with Ulceration
Involucral Syphilide.

1. The onset of the Mucular form is often sudden,
and is accompanied by severe headache, and
constitutional disturbance. The temperature
may reach 103.0 F. It is usually a mottled
Roseola, and is usually confined to the trunk
though it may be general. In time the rash
loses its "Rose" tint and becomes more coppery.

2. The Lenticulo-papular form often occurs
early in Syphilides, especially in those cases
which have not received treatment.
The lesions are slightly raised and smooth,
and they may occur on nearly any part,
the front of the toe arms, being a common
situation. The Papule may become squamous and
become covered with fine scales, or it may become
moist, and then a flat Condyloma is the result.
Papules exposed to warmth and moisture change from the scaly to the moist.

The miliaform papule consists of millet-sized papules arranged together in groups. They affect the hair follicles. The papule may become vesicular through exudation taking place into its substance, and the vesicle may afterwards become a pustule.

Syphilitic acne differs from the ordinary acne in that it is general over the whole surface, and not confined to the upper part of the trunk and face. It consists of discrete pustules, which are situated on a copper-coloured base. It is difficult, if the syphilitic acne is only on the upper part of the trunk, to distinguish it from the common form of acne, but when the crust of the pustule falls off, there may be some copper-coloured ring remaining.

In the exanthematic syphilide, the lesions are far apart and occur on every part of the body. There is first a coppery infiltration, then the epidermis becomes elevated into a flat pustule, and this desiccates and forms a brown scale. This is the superficial variety.
In the deeper variety the crust covering the ulcer goes on increasing in thickness, this being caused by the suppuration and ulceration going on beneath it.

Sometimes the crust remains flat, spreading at the edges, and then the centre of the crust becomes depressed. If the ulceration extends beyond the margin of the crust, the crust seems embedded in a punched-out ulcer.

Pyocele. This is nearly akin to the deep ephymatosus eruption. There is first infiltration and then the pustule attains a large size and is called a "Pyocele".

The crust becomes peculiarly laminated and gets to resemble an oyster or limpet shell. The subsequent cicatization and serpiginous ulceration may be very similar to the deep ephymatosus ulceration.

Syphilis affecting the Hair

Loss of hair is a frequent symptom of constitutional syphilis. It is usually associated with the earlier forms of eruption and is sometimes preceded by severe headache. The Moustach and Beard may become affected as well as the hair of the head. The hair loses its gloss, and falls out freely.
when brushed, the loss of hair is greater in debilitated, than in strong subjects.

Constitutional treatment in the form of the internal administration of Mercury, and a stimulating hair wash, will usually remedy this, the young recovering more readily than the old.

The Nails also, about the same time become affected by Syphilis. They lose their colour, are tender on pressure, and become very brittle.

Mercury given internally, and a local application of mercurial ointment will usually cure this very troublesome form of the disease.

Severe Sore Throat often appears with the earlier eruptions, but it is also to be met with in the later secondary, and tertiary stages. The patient may complain of difficulty, and pain in swallowing, and that he is much troubled with hoarseness. These symptoms may be slight and may subside, or they may become aggravated. There may be ulceration of one or both tonsils, with swelling of the neighbouring lymphatic glands.

Another form of sore throat is the Chaldean, or sloughing sore throat. This is a very destructive process, and is usually accompanied by Furfuria, and occurs
therefore, usually at a late stage of the disease.

General Characteristics of the Secondary Stage.

The different forms of the eruptions are composed either of Vesicles, Papules, or Pustules. They may be said to be indolent, without, as a rule, many feverish symptoms, involving in a short time the whole body, and appearing in some degree, by successive instalments. They spread over the whole body, without any particular preference to the face, rather than any other part.

The smell is hardly noticeable, though it has been cited as a means of Diagnosis. In fact there is none, except when the suppuration is very abundant, or when the eruption includes parts, where it causes a mucous purulent secretion, as in the case of mucous papules, or pustules.

There is nothing however as a rule peculiar in the smell, nor is the so called coppery tinge an invariably true guide, as in the Secondary eruptions which come on at an early period there is much redness, and no alteration in the cutaneous pigment is as yet observable. This redness is at first a mere congestion, which readily disappears under the finger,
A little later however it becomes an actual stain, on which pressure has no effect.

These purplish brown stains are met with in Psoriasis, and in other diseases, but if syphilitic, they are surrounded by a darker areola than if occasioned by other causes.

The seat of the eruption is not of much value as a means of Diagnosis, as the various forms of the eruption may spring up anywhere and when on the genital organs, they may simulate a Primary sore. An ulcerated mucous tubercle closely resembles a "Hard chancre," especially when it is solitary and is situated on the genital organs.

In shape, secondary eruptions usually present rounded and well defined patches, and as time goes on these may form distinct groups, which may assume annular or crescentic forms.

Secondary eruptions do not as a rule suppurate, unless the patient be constitutionally predisposed to it, and when they do, the pus is small in quantity. When no suppuration takes place, the eruption in time disappears altogether, and terminates either by desquamation or by resolution.
Histology of Syphilis.

Laido Neuman found that cutaneous Syphilis are due to the overgrowth of small round cells in the immediate neighbourhood of vessels. The vessels of the upper layers of the cutis and papillae are chiefly affected, but the vessels of the deeper layers of the cutis (arteries and veins) are also involved.

The intensity of the morbid changes in recent maculae is slight, but increases visibly in the papular, tuberculare, and gummatous lesions. The morbid products in the macular forms are limited to the Papillae of the Cutis, the epidermis not being involved. As the overgrowth of round cells goes on, the limits of the Papillae are transgressed, and the Peta becomes infiltrated, while the Cuticle becomes tightly raised over the subjacent another Peta.

The exudation consists first of round cells, but later on the cells take a spindle shape. Pigment is chiefly found in the form of granules of various sizes, and ranging in colour from orange to brown. The granules lie partly in the exudation, and partly in the connective tissue cells.

In the former case reabsorption takes place readily, but not so in the latter.
Then this structure is also pigmented.

The bundles of the connective tissue of the papillae appear to be swollen and spongy. This swelling may also be seen in the deeper layers of the cutis, when gummatous form.

The stave follicles are altered in various ways. The hair root may not only be surrounded by newly formed cells, but may be actually thickened by invasion of its proper substance. Clavate, lichenoid, and acneform growths are thus formed.

The same changes have been observed in the sebaceous glands. Giant cells were found in tubercular, lichenoid, and acneform syphilitic eruptions, as well as in cutaneous gummatas. They were not detected in the macular, recent lenticular syphilides, or in any of the primary forms.

Isolated tissues of the skin, such as smooth muscular fibers, seem to offer some resistance to the disease.

There is a persistence of anatomical changes, even after all trace of them has disappeared, as far as clinical examination can discover.

Microscopical investigations of Tauber Neuman, on the "Histology of Syphilitic Lesions" "Vierteljahr. füri Dermatologie und Syphilis" Janzet 2/85. Page 258.
Tertiary stage of Syphilis.
The development of gumma may be said to constitute the third stage of the disease, though Mr. Sangster in his classification places them among the secondary manifestations. This last stage of the disease passes through three phases before it attains its completion.
In the first of these the growths are developed in the more superficial parts, as the skin and the subcutaneous connective tissue.
In the second, the muscles, bones, and fibrous tissues are affected.
In the third, the viscera.
It does not however follow that this order is always maintained, as the bone may affected first, and then the viscera.

In the Bones, the syphilitic lesions are at first circumscribed, producing limited periostitis, or limited periosteal deposit. In the later stages, the bone perishes extensively, its tissue being invaded by gummatous material which interferes with its nutrition, and necrosis or caries is the result.

In the Arteries, the disease usually takes the form of lateral softening, and
Amebiasis, though in some cases the syphilitic deposit may affect the whole circumference of the vessel and obliterate it.

In the viscera, the lesions resemble each other considerably, the different organs being traversed by fibrous bands and sprinkled with masses of deposit, the central part of which softens into a gumma, while the external part forms a cicatrix round it.

The different stages of Syphilis
These may be stated as follows:

The Incubation stage.
The Local affection.
The Period of General eruption
Or of "Secondary manifestations"
The Stage of Gummatus formation, and ulceration, or the "Tertiary Period."

With reference to the differences which exist between the Secondary and Tertiary Periods Mr Hutchinson says "Everything that the patient gets, while the virus is circulating in the blood is to be considered Secondary".


Also, that as long as people can be inoculated with Syphilis from the Patient's blood, so long will the eruptions be symmetrical.
When however this period of infectivity, and asymmetry is passed, and when the poison is so far passed out of the blood that he is not likely to get a syphilitic child, then he is passed the secondary period, and whatever may occur to him afterwards belongs to the tertiary period.

The secretions of condylomata, and of ulcerative throat affections, are well known to be infectious, but it does not appear that the secretions from a gamma have this property.

**Marriage.**

With reference to the question, as to the advisability of marriage when a patient has suffered from syphilis, the greatest caution must be observed in giving an opinion.

Any external manifestation of syphilis is of course prohibitory to marriage, and the longer the period that has elapsed since the appearance of any manifestation, the safer he is.

As a rule a man is safe to marry if he waits three years; that is if, during the first two years he has been under treatment, and if during the last year no
manifestation of Syphilis has been observed. Occasionally however it breaks out again in the most unexpected way when many years have elapsed.

Syphilis conveyed through Vaccination.
Dr Buchanan, chief vaccinator to the National Vaccine Establishment, being desirous of testing the current belief that vaccine lymph taken from a Syphilitic person if unmixed with the blood of the vaccinator does not contain the Syphilitic Virus, and is hence incapable of imparting Syphilis by its inoculation, performed some experiments on his own person.

Children who were obviously Syphilitic, and in whom active symptoms were unmistakably present, as was clearly shown by cutaneous eruptions, anoxalpe, mucous tubercles, and ulcerations, were selected as the vaccinators. Notwithstanding this in the first two cases vaccination produced no result, the ordinary precautions being taken to avoid the admixture of blood.

In the last experiment performed June 6th/81 the lymph was taken from a Baby eight or four days old. Ten days after its birth this Baby began to have anoxalpe, and an eruption was on its arms when the
Lymph was taken. The vesicles on the child's arm were normal and not inflamed, and the immediate neighbourhood of the vesicle was free from eruption.

Lymph was carefully taken and vaccination was performed in three places, but the operation was unsuccessful and no pock arose.

On the twenty first day however the vaccinated places were red, and a small papule appeared on each of the places. These papules grew rapidly one soon becoming an ulcer, and at the stage Dr Humphrey and Mr Hutchinson were consulted, and they both agreed that the spots were Syphilitic.

The spots were excised, but towards the end of the month the throat was sore, the glands of the neck were painful, and a Poxola rash appeared on the temples, forehead, and back of neck.

Dr Bristow, Humphrey, Ballard, and Mr Jonathan Hutchinson drew up a report of these experiments.

They considered that it was conclusively proved,

1) That it is possible for Syphilis to be communicated in vaccination from a vaccine vesicle on a Syphilitic person, notwithstanding that the operation be performed with the utmost care to
avoid the admixture of blood.

2. Only one of the children used was capable of imparting Syphilis by the lymph taken from its Vaccine Vesicle, and these children were in such a condition of obvious Syphilitic disease, that the most reckless Vaccinator would avoid them.

They came therefore to the conclusion, that if lymph be taken only from children who are in good health, and who are carefully examined as to the existence of any skin disease, and especially as to the signs of any Hereditary Syphilis, that this is all the safeguard that is needed, and that Syphilis can only be imparted in such a manner, as no Medical man by accident, or carelessness is likely to imitate.


Mr. Roger, who has treated most fully the whole subject of Vaccine-syphilis, recommends in addition that the Vaccine lymph should if possible be taken from a child between the ages of three and six months. After three because by that age any Syphilitic symptoms will be certain to have appeared, and before six months in order that the symptoms may not
have disappeared under treatment.
Roger. op. cit., p. 219.

Treatment of the Soft Sore
The usual method, if the patient presents himself at an early stage, is to destroy the surface, margin, and base of the ulcer with a caustic. Nitrate of silver is often used for this purpose, but it is frequently ineffective as its action is too superficial.
Strong nitric acid applied to the sole with a glass rod, and then a simple water dressing will usually cure it, the parts round it being kept scrupulously clean by sponging them with 1:40 carbolic lotion.
When the slough has separated, some iodine dusted on will be found beneficial. Should a Bubo form the chief object must be to prevent suppuration, and to promote resolution. Saline purgatives with rest in bed and with ice applied to the inflamed gland are the best means of doing this. Should suppuration occur the gland must be opened by an incision to evacuate the pus, and a poultice applied.
Professor Hebra advocates the use of salicylic acid in the treatment of Soft Sores. The sore having been
Thoroughly cleansed, he applies a preparation of spirit and Potash soap. Then the sore is dried and pure Salicylic acid applied, the sore being afterwards covered with plaster. This treatment is renewed two days running, and in three days time the sore is covered with a white scab. The Salicylic acid is non-abandonal, and an emollient ointment is applied on lint.

He states that the scab speedily separates and the wound readily heals, without any likelihood of a Bubo forming.

Practitioner 2/64. Page 377.

Treatment of the Hard Chancre.

Excision. The value of excision of the true Hunterian chancre is of great pathological as well as practical interest. If it prove fruitless the conclusion is drawn that the operation was not performed soon enough, and that the nearest lymphatic glands had become infected; while if it prove successful, it is contended that the sore was only a local one, and that therefore the operation was needless.

In a true Hunterian chancre the virus disseminates very quickly, therefore the
operation to be of use must be performed at an early period. The chancre should be widely excised before the lymphatic glands become infected, and the number of cases in which this can be done at an early enough stage.

Dr. Oscar Lassar of Berlin (Janet July 21st/83) has performed the operation a great many times to remove superficial chancre with a single cut of the knife, or scissors, and when the chancre is deeper he uses a sharp spoon.

The wound is then closed and an Iodoform dressing is applied. Healing is usually obtained by the first intention, and should induration occur round the wound it is removed in a similar manner.

Of eighteen cases which he was able to follow up, thirteen went through the usual course of syphilis, while five escaped a general infection.

Dr. Lassar states, that in no one of these cases was he at all doubtful of the diagnosis at the time of operating. This shows that excision can rarely be of much service in the way of preventing the usual course of syphilis; still the operation is not a serious one, and it may be worth a trial if a case be obtained at a very early stage.
Medicines.

The medicines which are employed in the treatment of syphilis are mainly two, Mercury in some form or other, and Iodine in the form of Iodide of Potassium.

Besides these, remedies without number have been suggested, but they all fail to stand the test of time.

In treating syphilis we have two objects in view.

1. To cure the present symptoms
2. To prevent the return of the disease

If Mercury be taken for the primary symptoms the patient should never leave it off till the hard cicatrice has disappeared, and when it is given for the secondary eruptions, it must be continued as a prophylactic, long after they have faded under its use.

In an ordinary case of syphilis if Mercury be employed, the most convenient form to give it is by the mouth.

Re. Pil. Hydrarg. gr. iii.

Opii gr. $\frac{1}{4}$ - $\frac{1}{2}$

pt. pil.

Sig. One pill to be taken night and morning.
This is a very good form to give it in, the

treatment being continued till some slight

effect is noticed on the gums. The patient

must be carefully watched to prevent

salivation, as some patients come under the

influence of Mercury far more easily

than others.

A little mercurial ointment may be

applied to the local sore which will

usually heal readily.

Mercury however can seldom be given

long enough by the mouth to cure

the disease, as it acts on the patient's

stomach and intestines before it has

accomplished its object.

The Hydrargyrum Cum Cratae is often

useful where Mercury causes irritation

of the bowels. Two or three grains of it

combined with two grains of Dover's powder

should be given night and morning.

The function of Mercury in the form

of an ointment is a plan adopted by

some practitioners. This mode of

treatment involves a considerable

amount of trouble, and patients object

to the dirty appearance on the skin

and clothes. The use of the ointment of
Mercury, made by dissolving the oxide
in oleic acid, partially obviates this.
It is maintained that if the patient be
protected from cold, mercury can be given
for a long time by this means, without
affecting the stomach and bowels.
Some skins however do not bear injection
well, and a particular eruption occurs.

Some practitioners advocate the Hypodermic
injection of the Perchloride of Mercury
and claim that it causes a rapid disappearance
of Syphilitic symptoms.
John R. Shoremaker Espy M.D., in his paper
read before the Section of Dermatology
at the International Medical Congress held
at Copenhagen on Aug. 12th 1884, speaks
highly of this method. He states that in
many cases he has injected half a grain
a day, and that these large doses were
readily borne, the constitutional disturbances
caused by mercury immediately ceasing
on the injections being stopped.
He found that usually after twenty-four
injections the symptoms of Syphilis
disappeared, and that relapses were an
exception when the increasing dose
had been persevered in.
He considers it necessary to increase the
strength of the injection until physiological effects are produced, and then to continue it less vigorously until all symptoms of syphilis have disappeared, sustaining the patient with stimulants and good nourishment.

The injections of about $\frac{1}{12}$ of a grain however often cause considerable pain often lasting for some time and occasionally troublesome abscesses result. It is difficult to see what advantages this method possesses as compared with the internal administration or the method of injection.

If it be desired to give the Perchloride of Mercury by the mouth, the following is a good form of administering it:

\[ R_{x} \]  
Hydargyri Perchloridi q.s.  
Potassii Iodidi i.i.  
Decocti cinchonae zviii  
Méze jíře Mistura  
\( \text{Sçg. } 3\text{f. } \text{three times a day after food.} \)

Mercury can also be administered by the Fumigation Method.  
Many preparations of Mercury may be used for this. Calomel is the best and its good is increased, if the Calomel Vapour
be mixed with steam. The patient sits on a cane-bottomed chair surrounded by a cloak with a slit in the front. A properly constructed lamp is placed between the patient's legs, and on the top of the lamp is a trough, and also an iron plate.

A little boiling water is placed in the trough, and from twenty to thirty grains of calomel is placed on the iron plate.

As the water boils the steam ascends within the cloak, and a little later calomel also ascends as a vapour. In about twenty minutes the water trough and plate are both empty, the calomel being deposited in the form of powder.

The patient is enabled to inhale as much of the vapour as is thought requisite, by putting his head through the slit in the front of the cloak.

Mr. Henry Lee contends that mercury administered in this manner never produces salivation, and that it is beneficial from the fact that the stomach and intestines are free from irritation, and fit to receive medicines if required, and also that diarhoea seldom occurs except from accidental causes.

_Lancet_ 2/75. Page 268.

The calomel, being deposited on the skin, has a direct local action on the disease.
It is therefore peculiarly suitable for cutaneous affections, and many syphilitic eruptions on the face are very satisfactorily treated by this method.

The action of the medicine must not be interfered with by any article of diet likely to cause diarrhoea, and the patient must not be exposed to fresh air or cold water.

It is important to be able to determine when the mercurial treatment has been carried far enough. The gums usually give the first indication by a delicate red line running along their margins, this being followed by a pulpy thickening of the interdental portions, and finally by their retraction from the teeth.

Thus succeed an increased flow of saliva and a peculiar fetor of the breath.

While a patient is undergoing a mercurial course his constitution must be kept up well with good diet, iron, and often stimulants, as mercury more speedily exerts a debilitating influence on those whose strength has not been well sustained by a generous diet.

Mercury must be given with caution, if given at all, in patients suffering from
Ophthalmia, Bright’s disease or Diabetes. When however the symptoms of Ophthalmia are not far advanced, and the patient’s health is fairly good, mercury may be given with caution.

In Bright’s disease great salivation often occurs after a few doses of the medicine, and it then has to be discontinued.

Local affections.

For chronic papillary eruptions, Calomel ointment or the Unguent. Hydrarg. Nitrat. is often of benefit.

For the Psoriasis which attacks the palms and soles, the Unguent. Hydrarg. Oxid. Rubr. should be applied, the parts having been first well soaked in warm water.

For the ulceration of the throat which occurs in secondary Syphilis, and which is often very severe, the following is a good gargle.

\[\text{At Hydrargyri Dechloidi gr. ii}
\text{Acidi Muriaeii Diluti } 3\text{ii}
\text{Mellei depurati } 3\text{i}
\text{Aqua destillatae } 3\text{xii}\]

In the ulcerations due to Secondary and Tertiary Syphilis, the Red ointment
is good if the ulcers are small and scattered.
If they are painful, a little finely powdered
iodoform should be dusted over them.

In the treatment of Condylomata, which are
met with on the genital organs and anus,
great cleanliness must be observed as their
secretions are highly contagious.
A powder consisting of

\[ \text{Pt Hydriargyri subchloridi gr } \overline{\text{xxx}} \]
\[ \text{Acidi Boracici gr } \overline{\text{xxv}} \]
\[ \text{Acidi salicylici gr } \overline{\text{v}} \]

acts well when dusted on two or three
times a day, the parts being kept separate
with lint.

A mixture of equal parts of Calomel, and
\text{Oxide of Zinc also acts well, if dusted on.
the Ferri Sulph. Exrime. often hastens matters
if dusted on when the Condylomata are
winding away.}

Some Medical men disapprove of the use
of Mercury in Syphilis.
These hold that while it checks the
outward symptoms of the disease, yet
it hinders the system from throwing off
the virus as quickly as it might otherwise
have done, had the patient not been
mercurialized.
This is a problem which is very difficult to solve as different constitutions are affected by the disease in different ways.

The plan of treatment these men adopt may be termed the "expectant" treatment.

The patient's strength and general health is well kept up by good diet and tonics, and Iodine in the form of Iodide of Potassium is given occasionally for the different symptoms. I have seen cases do remarkably well under this treatment, and apparently shake off the disease with no tertiary complications, and I also have seen men who have gone through regular Mercurial courses, develop tertiary symptoms in the most unexpected manner.

If the disease is obstinate however, mercury is always resorted to.

Iodide of Potassium acts well in the severe headaches which come on when the secondary eruptions are developing, and for them it often gives magical relief.

All however agree that Iodide of Potassium is the main remedy in tertiary complications and in visceral lesions. It may be given in solution or in the form of pills, beginning with a small dose and increasing it,
In tertiary complications wine and good food are essential. Change of air, a warm climate and the use of appropriate mineral waters are also useful adjuncts to a treatment which usually must be carried over a long period of time.

I certify that this Thesis has been composed by myself.

J. M. Brandon Jones
M.B. C.M. Ed.