Thesis

Tuberculosis

by

Hamilton M. Telford

Edinburgh 1835
Tuberculosis

Is a diseased state of the constitution affecting various tissues and organs of the body, giving rise to symptoms which have been designated as syphilitic diseases. It has been long since I believe correctly associated with that peculiar state of the system, termed the syphilitic acidosis, and though it is said by some that tubercle and syphilis are distinct diseases, and that they are essentially different from each other in their nature. I think the evidence which we have in proof of their being one and the same disease, and that they arise from the same causes is quite conclusive, requiring no denaturalizing any part to it to further establish it. But that it was or is confined to the syphilitic temperament is now known to be incorrect, as it is found in those countries.
in which the inhabitants are of a
warthy complexion and in every
way the very opposite to those pos-
sessed of the Sanguine temperament.
The characters of the Sanguine
temperament being blue eyes, dark
or light hair with transparent and
clear skin with precocity of intellec-
tive, we even see this disease in
our own country among persons not
possessed of one of these characters.
The idea of it being confined to the
Sanguine temperament though
of very ancient origin arose from
observations imperfectly made in
countries where the greater mass
of the people correspond in their
external characters with those
possessed of the so called Sanguine
temperament. In such countries
we can well imagine the disease
to be of frequent seen among the light
haired and clear skinned not from
any predilection which the diseas
has. For persons possessing these apperas-
ces but simply because there are
a greater number of persons possessed
of these internal appearances to be
affected in these countries. This
idea was most prevalent from the time
came in England, it being well kn-
own that by far the greater number
of the people are of Anglo Saxon
descent the internal appearances
of this part of the population are
said to correspond more or less with
the so-called Sympathetic temperament.
All modern preachers tend to show that
it is confined to no race or community
or country or climate. Then a person
is predisposed to the disease either
from anti-hygiene, hereditary, or other
causes it may be developed in any
country under the sun, though in
some countries it is much more pre-
dant than in others, especially in
some of its forms or probably I should
say none of its secondary effects are
more prevalent in some countries than in others. In England pulmonary tuberculosis is very liable to occur and from its extreme frequency here it has been called the English Disease. The extreme frequency of the occurrence of this disease in England is probably accounted for by the most variable state of the climate which gives rise to coughs and colds and bronchial affections and in this way predisposing to congestion and suppuration, and when that has an supuration, takes place the blood having become suspicious from any cause previously existing, it is very liable to be of a tuberculous nature or perhaps intercell its self and from its low state of organization and its incapability of maintaining independent existence it acts like a foreign body there in whatever organ or tissue it is placed and there breaks down. It is very liable to cause deorganization and disintegration producing in this way frightfully savage or the hum
Once in England and in many other countries in. But this more particularly refers to the deposit as it takes place in this way. Though this form is perhaps more prevalent in England than any other country. It is by no means exclusively English disease. For most other countries can afford instances of it and if proper statistics could be had, showing that its relative frequency in some form, I think it would be pretty generally diffused. Neither as I said before, can it be said to be confined to any race or community, all being alike liable to it if exposed to its exciting causes. People from countries in which the disease is rare, are very liable to become affected with it on visiting Great Britain and remaining here for a length of time; and even the lower animals especially monkeys are very often affected with a disease in every way analogous to this here in many when brought over and confined
in this country.

For as I said before it is not confined to any class of the population in those countries in which it is most prevalent. The rich and well fed are affected with it as well as the poor and badly nourished, though in a smaller proportion as they have better means of providing against it as well as being protected from many of the influences which give rise to it with the greatest certainty if they use these advantage. But they are exposed to exciting causes which are peculiar to themselves even their luxuries which the poor are denied from their expenses are often of such a nature as to damage the digestive organs producing dyspepsia and a consequent weakness of the system from impaired digestion. And in this way acting not only as a predisposing cause of the disease in those who...
have as yet shown no tendency to it, but also as an excitant cause in those who are of a decidedly nervous constitution. The body being made as thin, less capable of resisting other diseases which may be of a debilitating kind, upon which tubercular affections may supervene producing very serious complications many of which prove fatal. This class of the population do not attend to regular hours, exercise, rest, and sleep in the manner they deserve. As it is well known in what food or evil may arise from the neglect of proper regulation. They too often prefer spending their nights in crowded assemblies or ballrooms in the latter of which places engage in a kind of amusement which is of a very exciting kind, but which I have every reason to suppose would not be of any harm were it possible to engage in it at a proper time. So that the hours for sleep would not.
he broken in upon, it is likely to place that they would have the advantage of having fresh air, and that there was some restraint upon them so that they would not indulge in it to such an extent that they become justified more than what is right. Nay, I could well imagine it to be of great service to them. But it is far other wise, as it is now engaged in. It is often buried to the pitch of very violent exercise in an atmosphere which all the attention which could be directed to it under such circumstances could not prevent from becoming impregnated with carbonic acid and other emanations from the body the breathing in of which by a delicate person is often very delusive. The temperature of the room soon becomes elevated so that the persons soon become bathed in sweat, and then not paying enough of attention to protect themselves from cold showers of air.
either from open doors or on stairs, as in passing from one room to another or in going home in the cold night air. Either walking or in a cold carriage and being in such a state as to be little capable of resisting the effects of cold, they are liable with coughs and colds which often pass down to the bronchi and to the lungs, thus leaving the groundwork of pulmonary tuberculosis. This is by no means an apocryphal statement, I can bring to my own recollection more than one case of an exactly similar nature. And even they do not affect me in the way I have been just now stating after having been up to a late hour dancing and beheld in perspiration. They do come and go to live not under circumstances to enjoy a comfortable night's sleep, so that the body and mind may feel refreshed and invigorated, but to feel weary and fatigued. And when
Sleeps. Note: Some, it is by no means of a refreshing nature. It is often bruised andSplintered, through which they arise with an aching head and throbbing pulse. Their whole body being possessed with a listless languor, their consciences hazy and jaded. Their appetite for and a general unfitness for partying in any exercise. There is a great contrast between the state I have been endeavouring to picture, and that felt by other persons who have instead of being engaged on the previous evening dancing, were enjoying their comfortable eight hours sleep and rest, having spent the previous day either in gentle exercise in the open air and having been up enjoying the healthful morning breeze either in some active employment or in walking instead of breaking up for the previous night by lying in bed till a late hour on the morrow. They can sit down to their morning meal with...
with this appetite sharpened so that they can digest it perfectly, to the ad
vantage of their whole system.

The system of education as it is carried out in many of the boarding-schools
in which young ladies are educated (or perhaps I should say confined)
is in many respects most prejudicial
to their health, and though they are
placed in these with the intention
of having them fashionably educated,
it is not their education alone which
is fashionned but often their whole
forms. From the close confinement
they are subjected to when their
growth is in its vigour, not being al-
lowed to be in the open air perhaps
for more than two hours each day
and from the great number of days
which are in a climate such as
ours) of such a nature as to forbid
even these two hours to be spent
in the open air, we cannot wonder
at the bad effects such a system
carries on them.
have upon persons so circumstanced. They have little or no exercise and that while they have is only of such a nature as to call the muscles of one part of the body-sentally the arms into action. This can only be of partial benefit as it does not take place in the open air. When they go to walk they are under the stultifying influence of the awning places of the foyers which is required to enforce the rules of the school by preventing them from indulging in any amusement which would be of such a nature as to approach anything like exercise. These remonstrances may not be applicable in every instance but I have reason to believe that in many they are applicable and they may have a great tendency to produce good effect in those schools for the education of boys though a great many faults may exist in the system when carried out little boys are not so liable to suffer from want of
Exercising to the same extent as fields, as they are not so easily controlled. But they are liable to contract habits which when inculcated in for a length of time tend to diluteate their constitutions and in this way predispose to tuberculosis and when a pernicious state of the constitution exists to cause the local deposition.

From mistaken ideas amongst the rich and higher classes of society, they allow their children to be exposed to cold with very light clothing supposing that by this means they will cause their children to be hardy and better able to resist the cold; a system most pernicious to the health of the children for though in some instances the child may be able to float through this hardening process from being possessed of a very strong constitution, it is by no means the general rule. For in many instances it is a cause of great danger to them.
about and death to the more weakly, from exciting pernicious and other affections which predispose to derange. I must not say that it is the duty of every member of the medical profession to look to and enquire into the method adopted by the parents for the bringing up of their children if he suspects that such a method has been adopted, and to have it given up if possible by showing upon what grounds the theory is founded. Nor are they to be allowed to draw false conclusions from single instances though in them the subject was in every way treated as their children are, and they prove strong, stout and healthy without giving one single symptom of disease though this is not to be doubted for we know that there are instances of persons whose constitutions are so proof against the disease that they might be exposed to all its eva...
leaves as far as diet and clothing are concerned and yet would not be affected. But unfortunately this kind of constitution is rare and forms but a very small percentage indeed of the whole population. The cause which gives rise to the disease among the poor and working classes are quite different from those which give rise to it among the rich as might well be supposed. One of a nature much more calculated to produce the disease at an early period of their existence especially in towns so much so as this the case that a calculation made from facts by Dr. Aspin of Geneva shows that the mortality among the rich from tuberculosis is but 6/1000 while among the poor it is 23/1000 the general mortality from tuberculosis being 15/1000.
Facts of this kind would go far to confirm the opinion, if it required confirmation, but I think it is pretty well established. Nor can we wonder that this is the case when we consider the circumstances under which the poor are placed. They generally inhabit the lowest and most crowded parts of the towns in which they live. Their dwellings are badly ventilated or I might say not ventilated at all, and whole families, and often more, occupy a space which would not be more than sufficient for the accommodation of one individual. From the foregoing causes they are not only breathing carbonic acid gas in large quantity and air which has been respired over and over again, but also the fetid excreta from their own bodies, which are too often coated with accumulated filth, as they have little or no
yard for personal cleanliness, their faces being the only part of them which they wash and that as seldom as possibly, usually once a week. Their houses are often included from every ray of light and for the best rays in a dirty vault in Edinburgh when the close and lines on the winds are so narrow and the houses are so high it is impossible that they could get access to the house. Those of the inhabitants who are not actively engaged outdoors during the day are placed under the same circumstances as stunted plants and are, as is evident by their blanched, unhealthy appearance, affected to a certain extent in the same way. Their food is oft one of a poor nutritious kind and bad as it is, it is, indeed, more unpalatable by bad cooking. Their clothing is not to their beauty and incapable of protecting their bodies from cold. Those of them who can work are
often employed in labour which requires
sic muscular exertion or in labor
employments where they have no
opportunities for the enjoyment of
good air or healthy exercise of any
kind. It can hardly be wondered at
that children brought up under
such circumstances and trained
under such antityphonic infe-
rances should be often affected
with hysterical diseases, and
of this there can be no doubt
from the vast proportion of adult
children who are affected with
hydrocephalus, serpulous ophthal-
ma, glandular ulcers, diminishing
sclerotics, with ulcers of
the bones and joints; all of
which depend more or less on
the serpulous state of the con-
stitution caused by the circumstances
under which they are placed.
Then there are a number of
trades and professions which
be divided into three classes according to the manner in which they act in producing and causing the diseased state of the constitution and the influence they have in producing some of the local forms of the disease.

1. Those which are in themselves harmless but from the manner in which they are carried out are productive of most serious consequences to those engaged at them.

To this class belong tailors, milliners, dressmakers, and some others, the evil effects of which, though less in degree, have to a certain extent the same tendancy in producing the disease. Tailors are confined all day in a sitting posture without their legs bent so as to support the weight of their dress at which they are working. The spine is bent forwards and altogether they have a most awkward posture as much as that their respiration, circulation, and digestion is very much interfered with.
This workshops are very often much too small for the number of people which are employed in them, and as a matter of course the atmosphere becomes loaded with carbonic acid and other excretions from the body. There is little attention paid to ventilation. Along with these influences they specially combine the baneful practice of whiskey-drinking, and indulgence in other excesses, all of which when combined have a great tendency to debilitate the constitution and in this way to lead to derogalous affections. They are said not to be much liable to acute diseases, but they are very liable to disorders of the stomach and bowels. They are generally meagre and thin, their complexion are bad, generally possessed of a blanched appearance, their muscular energy is feeble; few of them reach anything like old age if they continue at the trade constantly. They are particularly weak.
as I last before to seropulous affection and more particularly pulmonary tuberculosis. M milliners are nearly placed under the same circumstances as tailors. Generally speaking their hours for work are longer than theirs. They are in all other circumstances analogous to tailors and dressmakers, only dressmakers along with having long hours are often called upon to set up whole rents to finish orders sent in a hurry.

The large proportion of the patients in those hospitals are aside from consumption disease formed by tailors, milliners and dressmakers. finest to clear evidence of the evil effect of such trades in producing and predisposing to tuberculosis.

2. To the second class belong those trades whose, though affording a comparatively large amount of exercise in the open air eject the disease in those employed from the materials in which they
they look getting into fine division and being breathed into the air, taking their
flying deposit, producing irritation
and congestion of the mucous mem-
brane of the air passage wind of
the lungs, and leading to the dep-
osition of matters if the constitution
is at all predisposed to it. To this
class belong, stone masons, stone
herders and quarry men. They are all sub-
exto the same exciting causes of the
disease. Though they are actively em-
ployed and in many instances prac-
tices of great muscular strain, the
being generally working in the
open air while they are short and
beneathy consumption being often
found among them and other
Causes of Depetration.
3. The third class is principally
made up of knife grinders, fork
grinders and those who draw Pete's
last iron of these three classes the
knife grinders are least liable to
to affections brought on by their trade as knife grinding is caused on a flat stone which prevents the metallic particles from grinding together. This grinding takes place upon a dry stone which causes an immense quantity of fine metallic particles to be forced into the surrounding atmosphere in so much as to result in the faces and moulds becoming black with the metallic dust. This trade is very fatal to those who work at it, few of the workers reach 40 years of age if they have lived from an early period of their lives at this employment, and many of them die at a much earlier period. The Arco filing cutting is almost analogous to folk grinding, as far as their evil effects are concerned. In these trades the men first feel the annoyance in their nostrils. The lining membrane of the nose becomes copiously for some time and then becomes practicably 

heavily.
The air tubes are most affected. Respiration is difficult on any increase of irritation and a habitual cough is at length produced at the same time the alveolar system becomes ailed, and morning vomiting, or an ejection of mucus on first being is not uncommon. The disorder varies of course with the constitution of the individual, but the common termination when once permitted is bronchial or tuberculous consumption. The constitution becomes weakened by the quantity of mucus accruing, and the air is less capable of becoming saturated with water, or of being dissipated. I ought, however, to enumerate a number of other employments which also more or less predispose to tuberculous affections. The above serve my purpose as well as my space must be limited and my time required for other matters I must permit them to go unnoted. It has been shown by Dr. A. Smith,
Johnston, and some others that the
acneae which these once decay in some instances is quite differ-
cent from tuberculositis, but though
this is the case, no one will dou-
bt. But it is equally true that tubercu-
losis is very often found amongst
there and when there is any tender-
ness the formation in the constitution of
tendancy to the effect of localising
Hereditary Tendancy.

Though it has been denied by some
that this acneae is transmitted
from parent to child. The great
number of professional persons are agreed that it is trans-
mitted and I think of this there
can be very little doubt. When
we examine the evidence which
is adduced in its favour
we see that the disease occurs
with far greater certainty in the
children of those persons who
have from evident symptoms
of the disease and the great mor
dility of such children from
pernicious affections, such as
congenital hydrocephalus, and other
afflictions, is also strong proof of its hereditary
ism, and it even occurs in the collateral
branches of such families.
The occasional occurrence of
tuberculosis in various structures
and organs of the foetus in vivo
is another very strong proof of
in such instances with scarcely
any exception one or both par
teous or or have been tuberculous.
It has been been proved to be
hereditarily transmitted among
the lower animals by De Fonty
In a flock of Merino sheep
a tuberculous form produced
from 16 to 28 tuberculous sheep
Delfland. It is also so frequently
developed at an early period
in the children of tuberculous
parents.
that no doubt can be entertained of its origin from the earliest period of utero-pneumonia. The body of an infant a few weeks or months old the mother having been in the last stage of consumption when the pain at birth has been found in an extreme state of inflammation with an intense disposition of tubercles both pulmonary and subcutaneous, yellow pus draining the lungs on both sides as well as in the encircling and parietal membranes, showing that tubercles existed here before birth or a very tuberculous state of the blood. I think of this there can be very little doubt. For we have it from many of the most credible authorities, that in no instance yet found where Aecilia of the very young infant occurred or in the foetus in utero, without it having existed in the parent.
They consider that no negative evidence can be brought forwards to invalidate the opinion based upon these grounds that the disease is hereditary. This opinion I consider in, and I think it is worthy of all confidence until it is shown that the disease has entered in the gestation in utero and in the very young infant without it having previously existed in the one or other of the parents. These foregoing proofs alone settle the following in as far as I can conceive quite conclusively. It frequently happens that a healthy man marries a tuberculous wife and has tuberculous children, but he subsequently marries a wife who is not tuberculous and the children by this later marriage are free from the disease. The same proposition may be affirmed of a woman.
women who marry two husbands the one tuberculous and the other well. The children in many instances are tuberculous when one of the parents are affected and they are healthy when neither of the parents are tuberculous. The occurrence of the disease in families independently of any other agency to which it can be referred and under circumstances of hygiene the best calculated to ensure health. Also statistical records are directly confirmatory of the hereditary transmission of the disease. I cannot wonder that a disease influenced by so many infecting and predisposing causes as I have shown elaborate to be should be very prevalent in a country such as this where their causes have the greatest range of action, where among the fee...
their luxuries and amusements are
sources of the disease. Where among
the working classes their trade. Where
among the poor. Their food and filthy
dwellings are hotbeds of the disease
in all its forms as may be well
seen by the immense number of
persons affected by some form
who apply at our public dispens.
aries for medicine and advice. The
number of profligate children which
are to be found in the lower and
most crowded districts of any town
but my observations have been
chiefly made in Edinburgh. Few
families of the lower orders of the
population are altogether free
from this disease.
Part II. From the earliest period in the history of medicine, there have been theories brought forward to explain the cause and nature of tertianfe. Some of these were very wild in their character and far fetched indeed. Nor is this the case for it was not of the power of these theories until a comparative simplicity recent date to come to anything like a correct idea with regard to tertianfe as they were excluded from the key to its nature. In modern anatomy, a science which has put a great need of attention in late years and has been cultivated so that it has reached a very high state of perfection. So much so that by it pathologists are enabled to show the incoherence of the views held by the Ancients.
Although they have found infinity more difficulty in giving a satisfactory explanation of it themselves, even since the mode of appearances which are produced by it have been attended to with the greatest care and exactitude, and the chemical nature and microscopic appearances have been studied with the greatest amount of attention, by persons eminently qualified both by acuteness of perception and soundness of judgment. I think the best theory as far as I can judge is that one brought forward by Professor Bennett. It appears to simple and at the same time conclusive that I think it is well worthy of attention. Almost all other pathologists are agreed that in this disease the blood is in an unhealthy state and
of them were contented with resting here. But Dr. Burnett theory goes to
shew that the deficient state of the blood is a consequence of the imperfect manner in which
primary defecation is carried on. The Dr. Burnett agrees with Sir James
Black in saying that the pyorrhoea
is where it lies in and fixed
the tuberculous state of the cons
stitution and is a concomitant with it when it does so. It is a
tapaculous appetite, at one time
nauseous, at another a tendency to laurating of food.
The tongue is either morbidey
clean or else furry, mucous
acidity of the stomach and
alimentary canal, anorexia,
constipation alternating, with
harrowing. By the means of acidity in the intestinal canal the
abdominous parts of the food
are rendered incapable of
White.
Whilst the alkaline secretions of the saliva and pancreatic juice are incapable of neutralizing the acidity of these ejects, and in this way from the species of acid of transforming the carbonaceous constituents of the vegetable food into oil or of preparing fatty matters introduced into the system as to be easily applied to the loci of the system. Hence an increased amount of albumen enters the blood, and has been found to exert these power by chemical analysis. Whilst fat is largely supplied to the blood by the loci of the adipocytic in of the body, causing the emaciation which generally characterizes this disease. This emaciation will no doubt be greater or less rapidly according to the state
of the constitution. This theory is confirmed to far as those observations for which were made to ascertain the state of the chyle and the other fluids in the state of the system where are for the renovation of the blood.

From the observations which have been made upon the chyle the result of primary secretion is it is found to differ in the pernicious constitution from that of health. The vessels are laid to be imperfectly formed and the fluid in which they float considered as being less plastic than in health. Though there is great difficulty in preserving this fluid in a state fit for experiment, some direct observations have been made with regard to its constitution which might be inferred from the state of
of primary deposition. The Chess
being a fluid more or less app
roaching blood in its nature
composition and generally beli
ved to be for the renovation
of the blood. It cannot be won-
d at, that Where a fluid of this
importance to the rightly. Should
be changed from its healthy clas
s, then that it would let-
very prejudicially on the const-
itution.

The blood in tuberculous is found
to be changed both in its physical
and microscopic character from
healthy blood. as well as in
its chemical composition. some of
its constituents being in excess
others being diminished in quan-
tity.

When blood is drawn from a
tuberculous person it is found
to be slower in its coagulation
the clot is smaller in proportion

The
to the serum, it also appears imperfectly formed showing an evident tendency to break down and to return to the fluid state. The serum is in larger proportion more opaque and less clear, its specific gravity being much lower than it generally is in health, though even in health it may vary considerably.

Microscopic Examination. When the blood was subjected to microscopic examination by Dr. Glover in cases where there has been a strong tendency to hemorrhage, he found it to differ materially from that of healthy persons. The corporacles are described by him as being irregular in form and appearance, looking as if they were covered over with granules some of the corpuscles appeared to be star-shaped.
Dubois made many experiments both upon various species of blood from persons affected with scurvy, and he states that he found the colouring matter as if extracted in many of the cases he examined, sometimes appearing as if separated from at other times as adhering loosely to the corpuscles. He also found the serum differing in colour from what it is in health, some times being rose red, some times colourless. The serum and corpuscles correspond more or less in these tints they assume. He constantly found spherical and segmental corpuscles. The former did not differ in any appreciable degree from the appearance they have in health; but the latter were manifestly altered in their appearance from that of the others.
Then he states as having a crescent
or pointed in the centre, so trans- 
parent that they appear as if perforated. So that he compares 
them to wheels, others appear 
irregularly circular, some times more 
or less granular. He also states 
that from his observations they 
were limited on another kind, but 
that it did not differ in any 
minute degree from others — 
some other observers state the 
colourless corpuscles to be increased 
in quantity but there is doubtful. 
McAnule believes the red corpus- 
cles to be paler in colour and 
more irregular in form and 
more liable to be compressed into 
or to assume anomalous forms.

Chemical Analysis of the Blood
That it is attended with great difficul-

The determination of the various con-
tituents of the blood seen in health.
been left that it is materially 
changed through and No 
advantage assumed for it in hea 
lth is widely departed from 
and even some of the characters 
which mark its diseased state have 
been very clearly made out 
all analysts know The blood comp 
nodes to be very materially decr 
cased in quantity some time going 
so low that they approach the 
plate diminution which takes 
place in Anemia or Chlorosis 
The fibrin is also found to be 
decreased as a general rule. And 
it is no doubt true unless where 
there is some local or general 
inflammatory affliction to account 
for the increase. It is also 
put to be depaused in quantity 
The albumun is always found 
to be increased in quantity but 
depaused in quality. The cells 
of the blood are also found to be
Diminished but we cannot place much reliance upon this observation as they are very liable to be either increased or diminished by the food medicine or drinks the person is taking. The weight of the blood is always found to be increased. The changes which the blood undergoes are best seen by referring to the tables published by Mr. Canceby showing the results come to by various chemists. And as these tables bear on this subject I hope I may take the liberty of copying one or two of them into this paper. The only ones I think necessary are those by Pioleum and Kriki as the others are too long and my time is precious and my paper limited. I also rely on the mean of the averages of these cases made as well as the standard assumed for health.
<table>
<thead>
<tr>
<th>Number of cases</th>
<th>Number of corpses</th>
<th>Acid in</th>
<th>Alcohol in</th>
<th>Water in</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>101</td>
<td>3</td>
<td>79.3</td>
<td>616.5</td>
</tr>
<tr>
<td>2</td>
<td>98</td>
<td>2.8</td>
<td>79</td>
<td>820.2</td>
</tr>
<tr>
<td>3</td>
<td>98</td>
<td>2.4</td>
<td>79.1</td>
<td>820.5</td>
</tr>
<tr>
<td>4</td>
<td>97</td>
<td>3</td>
<td>79</td>
<td>821</td>
</tr>
<tr>
<td>5</td>
<td>96.5</td>
<td>2.5</td>
<td>78</td>
<td>823</td>
</tr>
<tr>
<td>6</td>
<td>80</td>
<td>2.3</td>
<td>78.7</td>
<td>839</td>
</tr>
<tr>
<td>7</td>
<td>79</td>
<td>2</td>
<td>79.8</td>
<td>840</td>
</tr>
<tr>
<td>8</td>
<td>79.5</td>
<td>2</td>
<td>80</td>
<td>839</td>
</tr>
<tr>
<td>9</td>
<td>68</td>
<td>1.2</td>
<td>80</td>
<td>835.3</td>
</tr>
<tr>
<td>10</td>
<td>64.5</td>
<td>1.8</td>
<td>79</td>
<td>855.2</td>
</tr>
<tr>
<td>11</td>
<td>65.5</td>
<td>1.7</td>
<td>78.5</td>
<td>854.3</td>
</tr>
<tr>
<td>12</td>
<td>64</td>
<td>2</td>
<td>79</td>
<td>855</td>
</tr>
</tbody>
</table>

The mean of the above averages:
- 82.12
- 2.92
- 79.06
- 636.6

The physiological standard:
- 127.426
- 2.932
- 78.244
- 79.878

The following table is the result of the analysis made by Dr. Hufckis of Baltimore of four patients who laboured under malaria.
The following diagram drawn from observations and analyses presents the state of the blood as it circulates during life in an individual predisposed to tuberculosis. The diagram in a manner clearly indicates the whole that is to be learned from these tables. Though it does not give the precise amount it indicates the general state...
And to the building up of the church, I mean spiritual, but not eternal. Any thing that is to be produced of the Messiah, has to be a new creature. Being built on the rock called, The Saeculum or great widget. As is our many expressions, the Saeculum is an imaginary subject, and to be loved, interested in. WhatDreadfulGrid. But it is clear from our hearing Rembrandt that in these times, we are drawn through so many things. The Saeculum is our grand, so our clear.

What Evergreen

Minister

The great

Not amount

Presumption of the sound

direction in which

Purposive choice

Affirmation of our

Hil evergreen

Phoebe (impartial)
and the maintaining the system generally in a state of integrity as we shall see as we proceed be cannot be supposed to find the tissues which are dependent upon the blood as they are any for a nutritive blastema for their building up and maintenance in integrity when formed and nourished by blood its minute elaboration in quantity to be imperfectly formed this vitality diminished spirit altogether in a lower type of organization than in the healthy state and when the proper constituents of the blood are in a healthy state and a proper relative proportion existing amongst them these tissues which are first composed up by cells and those as indeed may be all have an earliest and most affected and wide connective manipulations of course nutrition. Even when the blood is
is but slightly interference. In these
cases the acinar tissue is very
soon affected it becomes possessed
of low vitality its molecules are
held loosely together by a weak
and frail affinity. This is seen
by the want of firmness and
resiliency it is soft, jellyy and
fluctuous possessing more or less
of the character it has in the
embryo or in the very young
infant. Its defective structure is
also exhibited by the rapidity
with which it is formed and
again absorbed. At some time
appears to be more than ordinary
at times developed giving a such
appearance as is often seen in
children. This appearance is very
deceptive as it might cause a person
to be mistaken with regard to
the way in which they are matured
but it is easily discovered when closely
examined as it appears to be just
and
of any of the characters of fluid infiltration than a proper vitiation of the solids. Even to when an excess nutrition takes place which is sometime the case in tuberculous persons the time this facility and firmness in the facility with which it become absorbed by a true system, deriva
tion or decline indicates the back and state of its vitality and its imperfect nutrition. These remarks do not only apply to the more solid tissue properly so called under the surface of the body but also to the cells which form the basis of all the other tissues and organs of the body.

The mucous membranes undergo a phe
nomena of atrophy. They become thin delicate and of a pale colour as may be observed in the mouth
and particularly where it is exhibited around the tubercle so that it looks like a white line and has been said by some to be almost pathognomone of tuberculosis. Dr. J. Thompson describes it as a line of a white party here and that he found it almost constant in tuberculosis and this more so when the tubercle was deposited in the lungs. He considers this sign indication of the tuberculous state of the constitution more than any other single symptom. I have examined persons in the infirmary for this line but though I found the numerous frequently pale I could not say that I found this line to be present in every instance or even in the majority. The nose membrane as well as well as the other structures of the body are more or less affected but as there are no opportunities of making examinations of these during life and few have been made after death...
It is to be supposed that our information regarding this is very limited. Though in some instances where there is an undoubted predisposition to tuberculosis within hereditary or otherwise acquired when the voluntary muscles show evidence of being well nourished from their apparent great development and where even in some instances persons have shown a great amount of muscular power and aptness for exertion it may be seen that they are much more easily exhausted than those who have a healthy constitution and less able to preserve for a length of time under active exertions. It has been remarked that this tissue is not so soon affected as many of the other tissues of the body yet that it does become affected there is no doubt and in many instances at a very early period of the second stage of the constitution.
The voluntary muscles are generally described as being pale, slender and badly nourished, and from the imperfect manner in which these involuntary membranes are developed they are soft and flaccid. Such being the case there is a great and amount of ability accompanying this state, as is often manifest in prodigalous children in walking and also in adults by their incapacity to sustain exertion which requires much muscular power for any length of time together. Though from the integrity of the nervous system they show in some instances a great aptitude for exertion, they are little able to sustain it. They soon become exhausted. The involuntary muscles are also affected as is seen by the weakened state of the heart's action as well as by the distensibility of the muscular coats of the intestine and bladder.
But especially by the iris, the
habitually dilated pupil in those tuberculous
and consumptive individuals is thought
to be almost the best criterion of
the weakened state of the involuntary
muscular tissue, as it generally happens
that those in every grade of society
are called upon alike to express the
iris it cannot be influenced by voluntary
action. The rich have to see it as
well as the poor. The delicate female
as well as the hard working mechanic.
This is not the case with the other
muscles of the body. This state of
the iris is well worthy of attention
but that I think that it is influenced
by the tuberculous constitution
more than it would by any other cause which
would debilitate and cause muscular
or debility.
This viscus tissue is even less liable
than the muscular to be affected if
the accursed state of the syringia has
not existed at the time when the
cure.
bones were forming, as from childhood to adolescence, for as the blood has been tussoreous from an early period of infancy either from hereditary or other causes the bones are most liable to become affected and in many instances to a very great extent.

There are great variety in the size of those possessed of the peropulous constitution we have them from four feet to upwards of six, causing one to suppose from the great irregularity of the skeleton that the law which governs the whole growth and development the muscular and spheric was at times, and had us it were allowed them for three people. However it is rare that we find persons very tall, they are generally short, stunted looking persons. Then being very often a great want of harmony in their proportion.

The head is often large especially posteriorly, the trunk is often small, the joints large and the limbs muscular.
and erected. The forehead is often irregularly developed being some times projecting at other times low. The bones are very liable to become nodulated and uneven. In children when the head is enlarged and the neck short the bones of the head not showing any great tendency to adjust and unite so when they do so that it is at a much later period than in the healthy state, this state of matters is often associated with Hydrocephalus. The Malar bones are often large and prominent the lower jaw is said to be very liable to become elongated which gives along with the flabby state of the soft parts a most disagreeable appearance to the person. The thorax is often deformed possessing a want of capacity particularly at the apex. Appearing as if retracted from the scapulae the scapulae remaining prominent
which caused them to be compared to hoops by the ancients and was associated by them with the peregrine constitution. Sometimes the sternum projects so that the retro posterior diameter is less than the transverse or lateral which gives the thorax a peculiar form that has been compared to the keel of a boat and hence paid to be gelatinous. The divisions of the sternum are sometimes seen under the skin appearing as if imperfectly united. This fact has become prominent. Causing a great contrast between the thorax and abdomen. When as very often happens the abdomen is turned such property. The bones are said to be of less specific gravity than in the healthy state. The spongy portions being more developed in comparison to the compact tissue or tissue. The joints are often enlarged from the articulate ends of the bone.
having become as is generally the case largely vascular. The spongy portion of the bones appear more vascular from the texture being less compact as well as the bloodvessels having thinner and more easily obliterated. The spongy system generally seems to remain without much apparent change and does not appear to be affected to the same extent as the rest of the tissues, but no doubt if we had means for ascertaining we would find that the nervous system takes part in the general atrophy which is suffered more or less by all the tissues of the body.

I have hitherto been describing the preponderating and existing typhus tuberculosis, as well as the changes which the various tissues of the body undergo when the blood becomes changed from the healthy state to that of the tuberculous. I now come to speak of tuberculo
It is now generally admitted by the best competent to judge that tubercle is caused by an exudation of the liquor sanjuanii. This liquor sanjuanii having become modified in its nature as we have previously seen. The fluid part of which becomes aborted, and as we have seen before, there is an excess of albumen of a decomposed quality, diffusing in the blood of tuberculous individuals. And as the tubercle has been found to be principally composed of albumen. I think that we might be justified in coming to the conclusion that when such an exudation takes place, that it is an effort of nature to get quit of a substance which exists in the blood in too great quantity, and is of such a nature as to be no longer capable of being applied to any useful purpose in the economy. This
...seen by the great tendency of tumors to break down, showing that it has no power of further development or independent existence. In this way it differs from the other conditions by inflammatory and cancerous. In tumors never join to the development of perfect cells it merely stops with an abortive attempt at cell formation. While the inflammatory condition forces on to the development of perfect cells which become broken down and an aborting or else cast out entirely. While cancerous inflammation forces on to the development of perfect nucleated cells which have the power within themselves of reproduction and the maintenance of independent life. Thus cells are capable of very rapid reproduction as may be inferred from the rapidity with which cancerous growths take place. It has even been supposed by some...
that they can be transferred from one to another by inoculation and that they will there develop themselves, but whether this is a positive fact or whether it is deserving of no credence, I am not at present prepared to say. It has been said by the injection of cancerous matter into the vein of dogs that the disease was ultimately affected produced in the animal, but whether the disease was produced by the cancerous matter being injected or that the animal was predisposed to cancer previous is hard to be determined, as it is well known that the dog is liable to be affected with the disease independently. It has been often stated that men are very liable to cancer of the penis whose wives have suffered from that disease of the uterus or vagina.
Tubercle has been described as present in three forms by military surgeons and infiltrated. These distinctions have more reference to the age of the tubercular matter and the length of time the exudation has existed than any difference in their natures. It generally presents a yellowish or earthy white color. It varies in consistency from that of a substance resembling tough cheese to that of cream and possessing every gradation between these. Even in the same lesion it may at one part be elastic and tough while at others it may be hard as brittle or indurated, or else soft and creamy. When tough it presents on section a smooth or waxy surface. When soft a slightly granular appearance is sometimes there is mixed through it a quantity of mineral matter which
When causes it to grate upon the edge of the knife. In presence like meal is friable and may break down into a pulpy matter but ever yields a milky juice like lacer.

When a proper fragment of any tubercle is placed between two plates and examined with a microscopio power of 250 diameters linear it presents a number of irregular shaped bodies. These bodies approach a round oval or triangular form. They vary in their long diameter from two to two of an inch. They are the so called tubercular corpuscles. They are composed of a wall containing a number of granules without any distinct nucleus along with their body. These are an immense number of small molecules and granules ranging in size from a point scarcely measurable to the two of an
inch in diameter. The corpuscles are indeed more apparent by the action of weak acetic acid, but they are otherwise unchanged while many of the pleurales disappear. They are not affected by ether, or alcohol, but they are partially dissolved by ammonia being rendered more easily broken down. They are immediately and completely dissolved by potash in potition. The only way in which our tubercle differs in its microscopic characters from millary is that when examined it generally appears to be composed of more of the molecular matter and fewer of the tubercular corpuscles. Even in some instances it is wholly composed of molecular and particular matter. In some forms of tubercle the corpuscles are much larger than what would correspond to the measurements above given but still

they
they maintain their peculiar character. In these instances they have been supposed to approach more or less in form to the corpuscles of felipulonous pus. The gray semi-transparent granulation differs from the above very much in appearance, though it is found to be composed of corpuscles in no way different from those described above. It is of semi-cartilaginous hardness. On making a section of it, it is found to be more transparent. Its elements are not so well defined, the solution of acetic acid renders a quantity of fibrous bar in apparent among which corpuscles are placed. It also dissolves the granules and renders the tubercle or corpuscles visible.

When tubercle presents the cutaneous information there is a quantity of dust which particles of no regular form deposited along with them among the
Tubercular matter. This differs in hardness in relation to the amount of earthy matter mixed up with it. This earthy matter may go on depositing till the whole tubercular mass becomes transformed into earthy matter, the tubercular matter itself having become absorbed. Some tuberculosis is found conjoined with a quantity of pigmentary matter. And it has been supposed to be more prevalent in intestines which has existed for a length of time than in that recently deposited. It also is found to differ in its nature in the different localities it is found in. That which is found in the lung is quite different from that which is found in the peritoneum.
Termination of Tubercular Deposit

After its deposit tubercle undergoes certain transformations and changes, which may be looked upon as a cure as far as the mere deposit is concerned. It may after it has been deposited for a length of time and having become chronic as it were if the strength of the system is not finally impaired it is very likely to undergo the calcareous degeneration. The tubercular matter having become absorbed and its place now occupied by the mineral matter some times in masses of considerable size, when becomes ignited, it may remain without causing further irritation or it may produce ulceration and if situated in the lungs it may find its way into one of the bronchi and may become suppurated.

Tubercles soften and suppurate.
the results vary in the different tissues and organs in which it is deposited. When deposited in the common cellular tissue under the skin it gives rise to purulent abscesses and finally to ulceration of an indolent kind not showing any tendency to reparative action if the tuberculous induration is strongly developed. If occurring in bone it gives rise to caries, and ulceration of a an intractable character and if unhappily it has been deposited in the neighbourhood of joints their functions are more or less interfered with or perhaps altogether destroyed. When tubercles are deposited in the kidney and there undergo softening and suppuration the abscess if large generally bursts into the pelvis of the organ and its contents are evacuated mingled with the urine. Such cases rarely occur unless when the tuberculous habit is well pronounced.
Pronounced, as it is not deposited in the kidney till other organs have suffered severely from it. In the intestines it gives rise to ulceration of a peculiar character in the mucous membrane causing obstinate and exhausting diarrhoea. In the lung, after it has softened and expectorated or absorbed the cavities formed by it may heal in two ways.

1. By their contracting, their walls coming into close apposition and forming firm and cicatrices.

2. The cavities may not diminish in size but remain permanently, their interior becoming lined by a smooth membrane. Their cavities generally have an opening which communicates with a neighbouring bronchus. Tubercle may be deposited in the brain and go on to suppuration, and the formation of abscess where fine rise to various cerebral symptoms and lesions according to the position.
And in such cases it has generally been observed that the tuberculous corpuscles are larger and rounder than in other organs.

If it does not heal in one of the ways above described, death may ensue from exhaustion consequent on the discharge or from the disorganization of tissue or impairment of function caused by the deposition in a vital organ, or while nature is attempting to heal in one organ, or in part of an organ, the disease may be established in another or in a different part of the same.

Treatment of Tuberculosis

From the extraneous frequency and great fatality of tuberculosis in one or other of its forms among the races of the globe, but especially among the inhabitants of...
It is, the treatment of it has become a subject of great and vital importance. It is only within a few years that pulmonary tuberculosis as one of its most frequent forms has been thought to be curable; for when this disease had become once established it was thought to be inevitably fatal. And as to its other forms, such as internal puerperal affections, we see from the manner of treatment which was had recourse to that they must have been in a like condition, as the people put more trust in charms, and the royal tombs, and the power supposed to be possessed by the seventh son of the seventh son, and state more so in the ninth son of the ninth son, than in the legitimate members of the medical profession. It is quite different now, we scarcely hear of such a thing as a patient either cured or subjected to the process of cure in
any of the above ways. Though he may some times hear them spoken of with the greatest reverence and respect among the medical, without them being able to give any reason why the fell into use. But the nature of the disease being more better understood, from the advances made in its modo'd anatomy and pathology, has tended to do away any misgivings with the having recourse to supernatural means for its cure. For instances not after, can be brought forward to prove that it is curable by the means possessed by the medical profession, even in its advanced stages. By these means a cure may be obtained even when deposition has taken place to a great extent in a vital organ and causes a great amount of deorganization.

The remedies to be used
in a disease which manifests itself in so many local forms, the result of a vitiated state of the blood depends upon the imperfect manner in which primary digestion is carried on; symptoms various. In former times before the nature of this disease was known, the remedies brought forward and had recourse to for its treatment were quite innumerable; mostly all of these were used against the local forms and the different symptoms arising from the without any regard to the state of the constitution. Even then the remedies which were in many instances administered were of a nature rather to encourage the constitutional disease by the evil influences they had on the digestive system either destroying the appetite, or causing the rejection of the food to be so interfered with, that the system is never in weakness from day
to day. But of late years the meth-
ods of treatment has been revolut-
oneized, and very much simplified tho-
gue. It must be confessed that few
in the very advanced stage of the dis-
ees. Never shall these cases are on record
and there is no doubt but early reliance
to the remedies now in the hands of
the Physician may in the majority
of cases be successful in warding
off the Disease.

The subject of treatment
I propose taking up under three heads
by Preventative, Curative and Pallia-
tive.

And 1st: Preventive
It has been
proposed by some to prevent the
spread or the occurrence of the dis-
ease, by passing a law to prevent
marriages taking place between per-
sons labouring under the Disease or
under a strong predisposition to
the Disease. And also to prevent in-
these
those who are free from it from becoming united to those who are affected. The difficulty of carrying out such a proposition will be seen when we look at the very small proportion of the population who are absolutely free from it. Scarcely one man in 10,000 could pay if his lineage were investigated in all its branches, that his family is altogether free from every branch of tuberculous affections, and all tendency to the hemolytic state. This might be inferred immediately from the fact that it is very rare. It has to be acquired and then to become hereditary transmitted from parent to child. There can be no doubt that if persons were to pay that attention which is suf-
ficient, as the proper regulation of marriage amongst people of a pernicious tendency is great amount of human suffering could be prevented.
That it is improper for two persons to become married who are laboriously invests the venerealous taint. There can be no doubt, as we see with how much greater certainty, the disease becomes developed in the children of such persons as it often in a more aggravated form than in the parents. When either man or woman themselves to be the subject of the disease they should endeavour by all means to choose a partner as far removed from the disease as possible. And they in either side should take appropriate measures to prevent themselves becoming parents if they are suffering from the disease in any of its local forms. As it is generally believed that the disease is most liable to be transmitted if there a state of matters exists. If it is also generally held to be the case that persons whose constitutions are...
Obliterated from any cause whatsoever, whether it is of a tuberculous nature or not, will be most liable to cause Tuberculosis to be developed in the Children. This is almost proved by persons who had fallen into this condition subsequent to them having a number of children; those born before the constitution had got into a weakened state, were free from the disease; while those who were born subsequently, were affected. Parents and Guardians should as far as in their powers prevent too early marriages for this not only tends to produce deficiency in other respects, but also it is in many instances a fruitful source of Tuberculosis and especially among those of delicate constitutions. It is necessary, for the prevention of the disease in the Child if the Mother has suffered from it, or any other Tuberculosis
Affection that she should not shun it, but if her means will permit she should obtain the services of a healthy nurse. The choice of a nurse should be a matter of great importance and all pains should be taken to get one whose duty is to the health and comfort of the labourer under no decease and also that she is as far as possible skilled in the nurture of children. But if the circumstances of the mother will not allow her to procure a nurse, it will be necessary for her to take all the means in her power to improve the state of her constitution so that by so doing the nature of her health may be changed to a more healthy character. She should perseveringly pay attention to cleanliness both in her own person and that of her child. She should see that her bowels are kept regular, that her digestion is
is carried on in a perfect manner that the food which the takes is of a nourishing easily assimilated kind and if possible not to continue faulty habits. They should be possible live in some suburban district or in the Country, where they may have an opportunity of enjoying the grateful influence of good air and light and the peace deep and also Moreno. These matters are not only of the greatest importance to the mother herself but often the child will be advantaged in a relative degree. Great attention should be paid to clothing. It should be of such a nature as to prevent any feeling of inconvenience during the changes of the weather which are so liable to take place in this Country. The child should be early taught in these instances to take a portion to take feeling and when very young new things will or may be of less advantage for the mother. It should be given without any
Attempt to improve it by adding sugar and various other substances which may strike the fancy of the mother, for in many instances, I might say, it is rendered less capable of being properly substituted for another milk by the intake of
nothing. When it tends to become ascitic
and announcement of the digestive systhem, it may be combined with a little
lime water with great advantage. The
child often thrives very well on this
kind of food. As maturity approaches
great attention should be paid to pre
vent the child from suffering from
attacks of cold or from the accumu
lation of indigestible matters in
the intestines which by producing
diarrhoea, would tend to weaken
the system and impair even the
blood, rendering it more liable of
side, and in this way paving the
way to the occurrence of pernicious
diabetes. When this period arrives
it is an evident indication that
the
The child requires more nourishing and more cooked food, at this time it should be state more warmly clothed as generally speaking the heat producing power is at this period very low. Nothing could be more absurd or prejudicial to the health than exposing it to be exposed for a length of time to the evil influences of cold in the open air, with an insufficient supply of clothing, as is too frequently the case amongst persons in the higher ranks of life, with the mistaken idea of making the child hardy. Although it may be considered judicious that the mother should not expose the child, yet it is in all cases imperative that she should supervise personally its management and see that proper care is bestowed upon it, for it is unfortunat-
The child, with carelessness, if it be
state troublesome or inclined to
sigh whether this be the result of
the child, natural disposition
or their ill management.
The naseeties which they use are
generally some preparation of
opium which is not void of
danger in these primary effects
but tend to arrange the digestive
apparatus and as a consequence a
weakened state of the constitution
can ensue, obviously facilitating
the approach of, and predisposing
tubercular affections along with
the attention before and eliating
the child will be often benefitted
if not of a very weak constitution
by cold eliating occasionally.
At this period it will be necessary
to fend against and prevent the evil
influence of those diseases incident
to childhood upon which a tubercular state of the constitution is
able to superious as group, hope in couple, manly, punctuate, me.

When the child has come to that age when it can take exercise great advantage will arise from encouraging it to join in childish sports and amusements which are of such a nature as to invigorate the mind as well as to strengthen the body.

When the period for sending the child to school arrives, first attention should be paid to the locality in which the school is situated. If at all possible one should be chosen which is in the neighbourhood of the sea so that in summer the advantage of good air and sea-bathing would be combined.

And also that the studies of the school are not too conjuring so that there is not a sufficiency of time allotted for exercise this unnatural
this is of equal importance both to males and females. Also it is necessary that attention should be paid to the diet for instance are not wanting, where at least in schools, both for ladies and gentlemen, a sufficient allowance was not made for the necessarily large amount of food required at a time when the growth is taking place most rapidly. As the period of puberty approaches especially amongst females most attention should be paid to the state of the general health and in females care should be taken to regulate the urinary function. For females of a weak habit often suffer from their urinary functions not being carried on in a regular and healthy manner. In both sexes this is a most critical period and at this time there is an impulse given to the whole system both
both bodily and mentally. From the increased rapidity of the growth at this period there must be a great increase in cell development and a consequent greater demand on the digestive system to supply to the blood the requisite material for supplying the tissues. At this period the system is very easily influenced one way or another many at this period fall into disease, whereas they never felt sqrt of, others who were previously delicate, fat stout and strong but it would be necessary that they should carry on a proper systen of hygiene through life. For though in advanced life and when the constitution has got strong there is less comparative danger that at an early period is their perfect immunity from the disease. A great deal may be done in this way
of preventing the disease by due attention to the trades and professions suited for those who have any tendency to the disease or who have delicate health but any space will not permit me to go into this subject—

**Therapeutic Treatment**

When the luxuriant state of the constitution has once become it will be necessary to correct, and as far as possible, change the circumstances of the patient upon which the altered state depended for its origin. If he or she has lived in a close dark unhealthy atmosphere, there is no possibility of putting healthy exercise, as is often the case in the narrow streets and crowded closes of a city or large town. Very often under such circumstances known into the country or to the seashore will be of the greatest advantage. And when the health of the patient will permit it will be well to
have recourse to exercise either by walking or riding on horseback if in the open air will be of great advantage. Smoke should never be buried so far as to fatigue. Sea bathing will be some times of great advantage combined with friction over the whole surface. If as generally is the case hypothermia is present there should be removed by appropriate means. If the person is gradually putting away from him and then after the hypothermia symptoms are removed, cod-liver oil should be administered and even long time. This remedy has the effect of removing the hypothermia at the same time as it was given to alter the state and tone of the constitution but there are exceptional cases but then it may be expected from its use if the patient can take it without it disturbing the stomach. It is necessary for me to say any thing concerning this remedy further than that every experience of its use conforms the
justice of the high character it has been
and maintained since its first introduct-
on in this country as a Remedy for
pathogenic and other pernicious lesions.
The oil should when administer is pre-
sert be administered by the different am-
alytics (chiefly prepared over) which
shalt to increase the red corpuscles of the
blood &. Great benefit will often
arise in estimate hysperemia by
the proper use of the different
acids. While tonics combine with the
Trisulphid & Broomth. The bowels
should be kept regular by appropriate
means: Restoring, easily assimilates
food, should be taken. An atrophia
should be paid to clothing and
in every way as far as possible the
local disposition should be fostered
against. Exposure to cold should be
avoided, if coughs occur they should
be treated by appropriate remedies to
have them speedily removed. When
the local depositions have taken place.
State greater attention must be paid to the proper application of all the remedies while we have for the disease. All attention should be paid to hygiene. If placed in an internal part, something is to be expected from the different bone disintegrated remedies combined with the constitutional means.

The Patellar Treatment

I have little to say with regard to this treatment as I must either say little or say a great deal and as this paper has reached a length which I never intended it should I must be content with the former. The patellar treatment though there is no time in the disease course that it may not be had recourse to for the treatment of certain symptoms, since it is more particularly indicated when there is little or no hope of a cure being brought about and
When the whole of the remedies for
the cure have been found to fail
in so far that the disease is hurry-
ing on to a fatal termination.
All that can then be done to relieve
present suffering and pain need
to smooth the way to Health
must be had recourse to calmeries,
anodynes, astringents, and hypnotics
as they are generally indicated.