Recommended to the House Committee

H.O. Reins
On Tubercle
Its History, Causes, Symptoms & Treatment (particularly in reference to Phthisis)

Abraham Duke
"The History of Tubercle."

By the word "Tubercle" we understand to mean a term used to designate a peculiar morbid product found in different parts of the body, the subject of the term.

The word tubereal diathesis, and which is formed from an expansion of the degener Sanguiniflora. On examination this substance will be found to be composed of a mass of matter at first semi-transparent, but soon changing into a grey, yellowish white or yellow colour, varying in consistence from a somewhat firm body to that of the density of cheese or cream, according to the part from where it is taken and the period of the examination. When Tubercles first make their appearance, they are usually seen in small heaps, the size of a Millet seed, varying in form according to their situation. They ultimately coalesce and form little bunches thus completely destroying the regularity of the part: sometimes they remain for a considerable period without seeming to increase much or to occasion any very serious inconvenience, but much more frequently they sooner or later undergo softening, and when the lung is the seat of the disease, secretion is expected, giving rise to the formation of cavities, how often to the destruction of life. Tubercle is sometimes deposited in large masses at once and in the acute
form of the disease, the parts appear as if they were infiltrated
with this matter. There are other changes, besides those
that have been mentioned, which tubercles undergo, but these shall
be spoken of hereafter. Tubercles, though sometimes
the result of inflammation, occurring in a constitution
prone to the disease, will generally be found
to form, without the usual symptoms of inflammation,
being present, to arise from a disordered state of the
blood in connection with a faulty state of the re-
spiratory functions, and the deposit, when it does take
place, on account of its producing such low vitality
has always a tendency to disintegration. Tubercles,
that to the production of the healthy tissue, that
is formed from an exudation of the leucinor Sanguinis
when the blood is in a normal condition, in
fact it will be found that the tubercular exudation
never assumes the true cellular character, being
composed only of granular matter & nuclei mixed
up with it. The tubercular cells according to Dr Ben-
nett are very irregular in shape, being generally more or
less angular; small, containing particles that re-
spekt light, associated with granules, tendins,
of a light yellow colour, without any distinct nuclei.
They seem only to advance to a certain stage, then
breaking down become disintegrated. Whether they
really any nuclei or abortive cells, it is uncertain, the former he believes to be the case. After dissolves out the refracting parts. Acetic Acid renders the whole transparent. -- Although the suppuration that takes place in serofulous subjects generally from tuberecle, I have seen an instance of acute Tuberculosis affecting principally the second membranes, where it separates into two parts, one becoming organized, the other not, but was converted into this morbid product.

Under a magnifying power of 500 diameters Dr. Lebel says, Tuberecles will be found to contain a great quantity of motile granules, varying in diameter from two to three of a line, a hyaline substance which unites these elements to a species of corpuscles which gives them a peculiar character. These corpuscles of an irregular angular form, vary in diameter from too to three of a line and generally speaking present a well defined edge. Their interior is yellowish colored, slightly opaline and often contain molasses granules distributed through its substance. They never contain true nuclei, which are so common in cancersus globules, and so constant in those of pus. -- Acetic Acid, which renders the latter transparent and displays nuclei within them in a very distinct manner, renders the tuberculous also more transparent.
without disclosing true nuclei in it. If enough water be added to the tubercles to make them float, their form is discovered to approach that of an irregularly polyhedral sphere, instead of being flattened like the globules of pus or cancer. Pus has often been set down, says Dr. Lamber, as a sort of first stage of Tubercle and has even in the conception of the best confined with it, but these products differ essentially. Dr. W. Addison says that he has found all the characters described by Lamber in some cells of purulent matter from simple pimpls of the skin, and is therefore unable to subscribe to specific cells of the tubercular cells. He also affirms that all the most recent tubercular matter, that have been examined by him, have presented a consistantly granular appearance, being crowded with dark particles, apparently of a fatty or oily nature. Whereas in the cells of ordinary purulent matter, it is a few only that present this appearance, but a difference of this kind, which is one of relative number, only can scarcely, he thinks, be deemed a sufficient ground for a specific distinction. Dr. Addison further avers that the material deposited in the air cells of the lung in Pneumonia, when examined by the Microscope, compared with that forming Tubercle, presented no
more essential or specific difference, than exists between purulent matter recently operated & that of an old chronic disease, and says, were we to imagine the fluid elements of old putrid matter removed or absorbed, the remaining solid matter would appear to possess the character of tuberculous matter. The colorless elements of the blood, put tubercle, passing by insensible gradations into each other. Dr. J. H. Williams is disposed to consider tuberculous matter, pus and conglobate lymph only as varieties of the same albuminous matter that exists in the blood, and differing from each other, rather in their mechanical condition & consequent capability of organization than in chemical composition, and from the recent observations of Syrak, Hollner, Math Rothius on the nature of pus & tubercle, he appears further strengthened in his opinion. I am however inclined with Louis Dr. Alison to vote to agree in the statement, advanced by Defert on this subject. The deposits that take place under certain circumstances which have been called syphilis are, according to Dr. Alison really of a tuberculous nature, as no difference whatever, he says, can be discovered between them & tubercle, by the microscope and may occur as an idiopathic affection, a common during the convalescence from Typhus fever. But Dr. Brandt
"Vascularity of tubercle." Some have maintained that tubercle is vascular while others strongly oppose such an idea. I cannot, for my own part, see how they should be present in a substance so truly foreign to every living organization. Louis Pasteur very early showed that such a substance could never under the conditions of life as we know them, be discovered in the bodies. This is corroborated by Lávene.
is of a very different opinion, he says the Typhoid cell
varies in form containing nuclei, which vary in number, if
than be present, one begins to enlarge, as in Cancer, giving
rise to new cells; sometimes there are 12 to 20 present,
which shows the greater force of development in these
cells; they grow rapidly and a number of buds nuclei
that have escaped from the mother cell are seen.

Acetic acid makes the cell wall more transparent but
the nuclei are not affected by it. These cells are,
he says, found in the Medullary glands in certain
cases of fever. From this statement it would appear
they differ greatly from the Tubercle cell, particularly in
their regenerative formation. I have never had an
opportunity of examining this deposit.

"Chemical Composition of Tubercle." This says Dr. Thiers
consists of Animal Matter 98.15 per cent of Soda,
Phosphate of Lime & Carbonate of Lime 1.85 to 100.00
According to Dr. Glover's Animal Matter with
various salts, the former contains a large amount
of Albumen, some Carbon, gelatin, Hematin and
a small quantity of fibrin Hyat, the latter Phosphate
and Carbonate of Lime, insoluble Salt of Soda. Old
Tubercle contains the earthy salts and crystals of Carbonate
are sometimes found. The Blood in furious of a
tubercular, Constitution according to Federal Glover
many others will be found to have undergone a consider-
able change from that of health, being deficient in its
20 corrosiveness whilst the albumen contained in the sputum
is greatly increased, the blood at the same losing its physi-
licity being only susceptible of a low organization or
not organizable at all. As to the identity of Scrofula
and Tubercle, the majority of the profession I think
are agreed upon, but there are still some at the
present day, as there were among the older practitioners,
who strongly maintain they differ materially in
many points from each other, but I am inclined to the
opinion that they are one and the same disease.
Mr. Phillips, who has lately published a work upon
this subject, after entering pretty fully into the matter,
tries to prove that Scrofula & Tubercle are not identi-
cal in their nature, but has established no facts
which I think are very conclusive in that respect,
and sums up his observations by the following remark.
I apprehend it has been shown by abundant
evidence, that with the exception of the deposit itself,
which whether found in the lungs, or in the cervical
glands, whether examined by the naked eye, the mi-
croscope or by Chemical Analysis is very similar,
the circumstances attendant upon the development
of Scrofula and Phthisis are widely different.
In Seofula the glands undergo considerable change, inflammatory in its nature, before the matter is deposited in it; in the lung we commonly find the tissue around a recent simple tubercular deposit unchanged by inflammation. We find further that in districts where the cause of Phthisis act with most intensity those of Seofula felt lightest; that the age when the ravages of Seofula are most keenly felt, is precisely that when the visitation of Phthisis is least to be apprehended; that the boy who suffers more severely from one of these diseases is least affected by the other. And beyond all this there is the fact that among the numerous victims of Phthisis at least twenty out of every twenty exhibit as marks of having suffered from Seofula. It seems to me therefore that these facts constitute so clearly a marked difference between the two affections, that it will be most convenient, most conduotive to scientific correctness, to consider them as affections possessing a certain general similarity of character but no identity. It may be that they belong to same family, to the Pleurisy and Pneumonia; but everyone seems it desirable to make as clear a demarcation as possible between these two diseases. Any the same of Tubercular disease and Seofula, between which the points of resemblance are strong in so far as concerns the deposit, but in all else they are weak.
This gentleman in arriving at these conclusions has taken the tuberculous affection of the cervical glands as characteristic of Scrofula and of Tubercle, but I consider the structure of these parts so very different from each other, as readily to account for the various appearances of the Mantic Product, as well the subsequent changes that take place in it. It is also by no means uncommon to find inflammation associated with Tubercle of the lungs, in very many instances it is seen clearly to precede it. Dr. Alison has stated that inflammation is often found associated with Tubercle, it is impossible to say whether it was occasioned or preceded by its presence. We all know that the deposition of tubercular matter in the lungs do commonly excite inflammation of the parts immediately surrounding it. Dr. Louis thinks, with M. Grisolle, that it is by far the most common for Tubercles to form in the lungs with the inception of inflammation and believe, that it is, as I have just stated, the effect and not the cause of the deposit taking place.

As to the other marks of difference mentioned by Phillips, I think I need make no comment on, farther than to say, that the equally strong to the Tubercular affection as they do to what he calls Scrofulous, and designate as I do in the identity of the two diseases.
In children that are tarbolous say &c. Bennets, the abdomen is often found so large distended that it is generally preceded by disturbance of the digestive organs. The system are wasted although the Countenance may appear particularly healthy. The intellect precocious or unusually dull. After a time the upper lip is found enlarged with without enlargement of the cervical glands. The eye, become particularly bright & the parts usually white presenting a livid appearance points of the fingers flatten out. The eyelids are unusually long & later in the disease they fall out owing to disuse of the frontal glands, sometimes chronic disease of scalp are present.
propose in the remaining part of this treatise to use the
words Scrofulous & Tuberculous as synonymous terms,
I think it is much to be regretted that the latter have been introduced into medical nomenclature, when
the former from long usage (although its meaning is
somewhat vague) might if retained alone have been
since much less confusion. — Another great similarity
in the two diseases might be well be mentioned in the figures
of the lungs becoming Fiber Bank, after the removal by
amputation of a scrofulous disease of the joint.
The External Phenomena of Tubercle: with regard to the
Internal configuration of the body, which precede the tuber-
culous or scrofulous deposit, marking the tissue in a
form as it had been called, that can be depended on,
but many persons entertain an opinion that a partic-
ular character of the body is sufficiently constant in such
case to warrant the belief that it fairly represents
the existence of Tuberculosis, but it will also be found to
prevail in persons of very opposite configuration... Scrofula
says Dr. Alison may be recognized to be present
when we have inflammation going on unchecked by the
usual remedies and the deposition of Tuberculose matter,
and when we meet with persons, particularly young men,
with a soft skin, an excretable but comprefible pulse, we
should always regard them as very to become affected by the disease.
Of Dr. Addison's observations I consider to truly valuable. Characteristic of all we understand as diagnostic of the constitution being tainted with this disease that I shall take the liberty of copying them verbatim. He says, "That as long as the body remains in health, and has never been otherwise it is impossible to speak with certainty respecting this dangerous diathesis, whether it be or be not present, for it is not by the phenomena of health, but of disorder or disturbance that this is determinable; when for instance a part has suffered from irritation and has its irritation increases in consequence the inherent constitutional disposition this covers itself by the ensuing morbidly. We may say the form a suspicion of the diathesis by the line of the complexion, the colour of the hair, the tone of the face, but a practical conclusion is rather to be drawn from the phenomena of any peculiar morphological action which may occur from the behaviour of the textures under the influence of wounds, injuries, or under the ordinary or common forms of illness. Rash, delirium, scarlet fever, hooping cough, to which all growing human structures are liable. When a bone is broken, a joint sprained or a wound inflicted on the skin, the phenomena, times, stages of the reparative process in healthy bodies or in good constitution have been ascertained by experience.
and recorded; any unusual prolongation of the period or any irregularity of the operation of a case being rightly attributed to a bloodless cicatrix.

Frequency of Tubercle. — From the almost universal prevalence of this disease and the great mortality that attends it, I think it incumbent on every physician to study well the phenomena that accompany it, and make every effort in his power both for its prevention and cure. Dr. W. Addison tells us that he has found tubercles more or less abundantly in lungs apparently healthy in one third of cases that he had examined, and Dr. Allman and Bucnells, from the numerous observations they have made in the pathological theatre and elsewhere, have arrived at similar conclusions. — In a table drawn up by Dr. Parvino and inserted in his Memoir on tubercles, it is stated that of 919 autopsies of Children from 5 to 15 years of age, 578 or 3/5 were tuberculous, that is to say from the 4th to the 16th year, the number of children presenting tubercle in some of the fibrous or serous tissue, is usually greater than of those free from them. That one observer of the Patients dying in the Hospital of a Charity, that 3/5 are tuberculous, and asserts further that Niguidt states that he does not exaggerate when he says that 3/5 at least of the old men whose organs he has examined after death, present evident incontrovertible traces of tubercular disease.
The socalled sarcoma has, says Dr. Alison, a resemblance to the tubercular disease. Occurs in pernicious persons. These tumors have a very rapid growth destroying life. In other parts tubercle will be found to be present.
of the lungs, not of recent disease but of former malady. This last assertion does, I think, go so far to prove that tubercle is either partly under the control of re- 
ation, or entirely so. Peculiarly a scorbutous habit of body are very liable to chronic diseases, attended with the deposition of tuberculous or fatty matter.

In disease of the liver, if the heart the deposit is fatty.

Carditis of the liver and also of the kidney is produced by fatty granules collecting in the secretory part of the organ so as ultimately to destroy their healthy functions.

The heart itself, as shown by the microscope, is very liable to undergo fatty degeneration — the presence of which destroy its muscular and very frequently is the cause of sudden death. This substance likewise enters into the formation tubercle. Individuals thus tainted with this disease are particularly obnoxious to attacks of inflammation on slight exposure to cold, the character of the disease increases itself in being so little under the control of the usual remedies for inflammation and always shows a great tendency to terminate in ulceration or destruction of the part affected. At the same time there is usually less pain present than in healthy inflammation, it is usually also accompanied with great debility, symptoms of hectic. The result of this kind of inflammation is very various, when it attacks the eye, also for
on the Cornea which sometimes penetrate through into the
Anterior Chamber and destroy the organ. If the synovial
membranes be affected it produces the gelatious degenera-
tion of that structure first described by Dr. Begg. Brodie's
description of affection of the cartilage of the joints: this may also happen
when the ends of the bones entering into the formation of a
joint, are attacked, with or without an al SE BBN communi-
ating with the joint; when however the latter occurs
the constitutional symptoms are greatly aggravated, and
should the disease be confined to this part the timely re-
moval of it by the Surgeon might be of the greatest bene-
fit. The relief however is but too often only of a tem-
porary nature, as it is no uncommon thing to find
other organs, that were not before suspected, now com-
mon the disease, and very probably of this is in somewhat of an
advance stage, hence the great propriety of thoroughly
investigating in the whole circumstances of the Case be-
fore determining on any operative procedure.
Mr. Vincent states that when suppuration is prevented
from taking place, as when after the cervical glands are
affected, other organs are saved from the disease, the
would seem to point out a danger in interfering in
such cases. Instances are recorded of cases of disease
in joints by ankylosis, but of the truly suppurative kind
they must be I think very rare indeed.
When the serous membranes are affected adhesion to the
neighbouring parts are the consequence, which interfere
very materially with their functions. When the deep seat
lymphatic glands are the seat of the disease, which is
usually the case with Children, the matter deposits in
them instead of becoming softened and discharged by
ulceration, which is a fact usually when the disease is
attacked more superficially, is converted into a coagula
tion substance and in the case of the bronchial
glands, it is discharged by ulceration into the Bronchi,
and being expectorated a cure sometimes results.

The Living's Bronchial glands, says Dr. Williams are
by far the most common seat of tubercles; when found
elsewhere tubercles commonly abound more and are
rarely advanced in this part. The situation of the preva
ance of tuberculosis, this rule varies also with the age of the subject.

Thus Mr. Laforwer found yellow tubercle to occur
typically in the cervical & mediastine glands; next,
in spleen, pleura, liver & small intestine, but frequen
ty in the large intestine & perianum. More rarely in this
part. In 357 consumptive (chiefly adults) cases
examined by it Louis, tubercles were found as the small
intestine in 1/3 of the whole, in the mesenteric glands in 1/10,
the large intestine in 1/9, in the cervical gland, in 1/10,
in the lumbar gland in 1/12, in the spleen in 1/14; and in
other parts in smaller proportions. The breast of Stephen, persons is often increased in quantity, a low specific gravity, with a deposit of the carbonate of ammonia, and of a pale colour. From the liability of so many parts of the body to the deterioration of tubercular matter, a different name according to the part affected has been given to the disease, as for instance, it is found in the mediastinic glands it is called节's presentation in the lungs tuberculosis. When the brain is implicated it is generally regarded as a tuberculous affection of that organ, so also, when the synovial membrane of the bones are involved of the disease. The latter is better known by the name of Caries Synovia. All these affections are characterized by symptoms somewhat analogous to inflammation, but there is always less pain and pressure and assumes more chronic form. The impaired condition of the solids, says Phillips, in tubercle is owing to the blood losing some of its red particles, which renders it more watery, the chyle is too poor in its proper elements to reanimate the blood, so it may be supposed, all the elements derived from the blood are of a bad quality also. The experimental secretion, shows equal variation from the standard of health. In digestive serous membrane often requires that condition so well described by the Dr. Todd as occurring in human
When tuberculosis attacks children it most frequently does so about the 1st month after birth or at weaning or before the age of 3 years. The lymphatic glands will generally be found principally affected. When the submaxillary glands are implicated it so entirely prevents nutrition, as to prove fatal at no distant period.

Dr. Allison says 1/3 of the children in Edinburgh as well as in some other large towns die of this disease under the age of 2 years. After seven years of age the tendency to these glandular affections decreased.
Dyspepsia. He described it as the cause of scrofula. I say, Phillips, regard it as the result of an already contaminated constitution, in many cases, only leading to the deposit. As all these morbid conditions are apt to occur in different members of the same family, we may look upon them as mere modifications of the same kind of disease, and as similar causes will be found to give rise to them all. Being benefited, generally, by the same remedies, it will only be necessary for my present purpose to introduce into this paper one of them. As the tubercular disease of the lung is by far the most common as well as the most fatal, I have chosen that for consideration, on the present occasion. Having premised the subject with a few prefatory remarks, I shall proceed to the causes, symptoms, treatment, &c. of this disease.

"Tubercular disease of the Lungs, or Phthisis Pulmonalis" (this last has been given to the affection from emaciation having been observed to be generally present) is a disease of the lungs commonly of a very chronic nature. It is found principally to attack persons between 15 and 35 years of age, but no age seems exempt, as it sometimes has been known to affect children of 2 months old as well persons upwards of 80. This affection seems to prevail more particularly in countries liable to great
vicissitudes of temperature, hence it is more frequently met with in this and countries similarly circumstanced. It is much more rare in very hot or very cold climates, and we find that persons inhabiting the tropics are very liable indeed to become tuberculous if they come to dwell here. The same remarks also apply to the monkey and other animals of hot countries when brought to these parts. The Children of European Parents born in India, owing to the debilitating effects of the climate, are very prone to become tuberculous, if they remain there. They do however under some circumstances escape, or becoming as it were naturalised to the place, the best mode of preventing them from becoming so affected is to remove them to this or some colder country for a time.

In cases of acute Tuberculosis there is often an appearance of emaciation present, although the disease may be very general; it runs its course so very quickly that half the mediastinal glands are infiltrated from the first, there is no time for this to take place. There is a preparation in the Museum of the University, taken from a stout young woman both lungs of whom were affected; the disease in this case terminated fatally in three weeks, without emaciation or loss of weight. I saw a similar case in the Royal Infirmary of a stout middle aged man, who died very soon after the attack.
and in whom most of the internal organs were more or less affected with tubercles; in this case the disease had advanced farthest in the Peritoneum, which was the number of tubercles near that an appearance but very unlike the confluent form of Small-pox was seen. The lymph that had been exuded appeared to have divided itself into two parts, one of which had been organized and formed Adhesions in which the tubercular matter was deposited. In this ease no appreciable Specia
tion existed. Dr. Alison mentions the case of a Child who died after 14 days illness. Like all other Chronic dis
tease, Phthisis may present numerous varieties in its Course; it may prove fatal, day by day, in a period of dying from 3 months to two years; the duration of the affection being greater between 15th and 7th year and least between 15th and 30th year. In many persons I think the disease has lasted a much longer period where pro
pert prophylactic measures have been resorted to.

The Essential Character of Phthisis consist of a de
position of tuberculous matter in the Air Cells of the Lungs; this may at first assume the form of little round or a
regular shaped masses, which may be either isolated or aggregated together in bunches, of a semitransparent
opaque, pale yellow or yellowish grey, colour, of a somewhat firm structure or breaking down under slight pressure, be
Chees. These little maps, after a time, become enlarged, from fresh depositions taking place around them, for such is the low state of their organisation, that seems to have no power of growth within themselves, but having been once develoed, although they may remain in a crescent state for a longer or shorter period, they sooner or later undergo softening or disintegration in which state, when they communicate with a bronchial tube, they are effectually led, at other time, they give rise to cavities, which ultimately by the process of ulceration open into some of these tubes.

This however is not always the case, for sometimes the tumours, if they exist in small numbers, lose their animal substance, shrivel up, become converted into calcareous matter, around which a cyst forms, and no longer producing any irritation, nature performs a cure.

This may account for the numerous instances that are met with, of their existing deposits, attended with hardening of the lungs; in old people, this condition is very frequent, as has been found in half the persons that have died in the Seapatient Hospital at Paris. The same thing has been seen in numerous instances in the bodies of old people by Dr. Bennet, when acting as Pathologist to the Royal Infirmary. We have therefore a clear proof of the casuability of this disease. In case such as these, it is observed, the usual symptoms of the disease were ever seen to be present.
Dr. Alison says that the symptoms of tubercular disease of the lungs will suddenly subside on the intervene of severe pain in the head, which depends upon the formation of Tubercles in the Brain by a kind of miliary inflammation. A somewhat similar thing happens after amputation of a Scorfulous joint or even of a Scorfulous artery when the lung or some other organs are very liable to become affected. This he thinks may take place through the medium of the blood.
Mr. Louis in speaking of the depressions of softening sometimes seen in the lung, says, "They have not appeared to me to be connected with any particular lesion. I have frequently seen them when the pulmonary tissue was either healthy or simply a little indurated in the vicinity of the Pleura, or on the other hand when the upper lobe presented at its upper softened tubercles, small tuberculous excavations or from disunion." When these appearances present star-shaped depressions, I think they can only be produced by the healing of Cavities, but which may become the result of tubercle or pneumonia, the situation of which would however throw considerable light upon the subject as the former is so universally found to attack the apex, the latter the base of the lung. Sometimes the tuberculous matter, from being infiltrased from one large tubercle, and this softening, some day at the circumference of the center, at last caverns are produced, which lead to organisation of the lung, and death at an at very distant date. In young children the disease attack the Brain, without affecting the lungs, that is contrary to the opinion advanced by Louis, who says that Tubercles are always present in the latter whenever they are found in any other organ. - "Softening process." Much has arisen as to the manner in which the latter place.
perculent. - The changes says Dr. Allois, that take place is
_tubercle_ approximate to those of inflammation in all its
stages. - They either break down, or are converted into pu-
tulent matter in that state are arrested. - Larrue is of opin-
on that softening does not take place from any
changes in the tubercle itself, as supposed by Lacassine,
whether does it commence in the centre, this appearance
being given to it by its centre never having been filled
with tuberculous matter, but only with some other secre-
tion from which it had detached, but it always takes
place from the circumference at many points. This
process may probably be brought about by the irritation
and necrosed elevation of the surrounding part, occasioned
by the presence of the foreign body. - There is a disease
of the lungs prevalent among Colliers called the Black
Phthisis; in which the lungs become loaded with Carbone-
ous matter, the origin of which is somewhat obscure, from
the appositionation being dark colour, they commonly call it
the Black Spitt. It is found principally to attack those
who use gunpowder and are engaged in excavating the
passage. It is also very common in Paris. Dr. Bednell
thinks it arises from some change in the Blood, from which
the Carbon is deposited, and also from impure air. The
Thyreo-
chial glands are often found loaded with the Black deposit
in person who die of Common Phthisis. Stone matter, from
inhaling particles of siliceous matter and also for quinine. Throat glands are very liable at an early age to become phthisical - there is hardly an instance of a hearing male in Edinburgh, living to the age of 40 who is not so, and Dr. Alison suggested the wearing of moustachios as a preventive, from the circumstance, it is said, that he person is supposed to sit to pass them the sandy particles without such a protection to the air passages. When the lungs are attacked by this disease, the apices will generally be affected and the disease more advanced in the left lung. Should it be present in any other part it will be found generally I have arisen from some other disease. With regard to the law laid down by Linus with certain exceptions, I think it is believed by most persons, the state that whenever tubercles are found in any organ they will invariably be present in the same advanced form in the lung. This does not hold good however in all cases, as in some persons who have died of phthisis, the bronchial glands have been found to contain cretaceous deposits, evidently the result of tubercle of a much more ancient date. As to the contagious nature of phthisis no very concrete conclusions can be gathered from the cases that have been reported. I have seen a few cases where I have thought the disease was propagated in this way, but both parties being exposed to the same exciting cause, might account for its
apparently infectious character, under any circumstances I think no young person should be allowed to sleep with an individual suffering under Phthisis. Dr. Alison mentions the case of a child contracting the disease in this way from its nurse and its acquaintance with many cases of the kind. He says physical persons in the South of Europe are deemed avoided as if they were the subjects of some contagious fever "caused of Tubercle." These may be divided, for the sake of convenience into two. 1. The predisposing or indirect, and 2. the exciting or direct. Among the predisposing causes of Tubercle I include: Hereditary predisposition; Food deficient in its proper nutritive quality; Injuries incurred particularly if cold and damp be present; Want of exercise, and in fact everything that has a tendency to deprive the vital powers. With regard to the Hereditary predisposition is the disease that much difference of opinion exists among medical men. I have myself met with instances in which the disease could be traced to this cause. I have also known large families, many of the members of which have died of Phthisis, on reaching about 20 or 21, whilst to all appearance the Parents have been quite healthy, shown no symptoms of the disease in any of its forms. Some cases are records of Tubercles have been found in the lungs of fetuses, but they are rare. I am aware there are some who will not allow of the hereditary influence of this.
or any other disease, but if we can admit the possibility of Gout, Insanity or Cancer being hereditary, as well as any peculiar deformity being sometimes transmitted from parent to child, I see no difficulty in reconciling why this may not be so too. In the Brompton Hospital report it is said that 1 in 6 cases could be traced to hereditary taint, and that daughters are more liable to inherit the disease as sons. I may also add that this division often over one generation takes place, in the west. From this above report we find, contrary to the generally received opinion, that Malaria was both more frequent and fatal in the Metropolis than in the country. In Paris, according to M. Louis, the reverse is the case. "Food of a bad quality, as too much of the vegetable diet in early youth, is perhaps the most fruitful source of the disease and tuberculosis in all its forms. For if we consider for a moment how the blood becomes impure, as well as the digestive organs under such circumstances, we can readily understand how the whole system becomes affected, yielding liable to the deposition of tubercular deposit matter from any very trifling exciting cause. These remarks, apply principally to children as we find improper diet in the case of adults most generally gives rise to Scroful. "Bad air," arising from densely populated districts, particularly if combined with cold and moisture may also be regarded as tending to his development.
of tubercle; this has too often been exemplified in persons inhabiting such localities, and in an instance of a change to a more high and dry situation the good effects easily produced by such a procedure were most marked. I allude to the case mentioned by Dr. Alison of an Orphan Asylum in Edinburgh, which was situated in a damp close situation in which scrofula in some form or other, was always raging; the only thing that proved permanently beneficial was the removal of it to a more airy and dry situation.

In respect to climate and temperature, Mr. Louis seems to think they prejudge but little influence sitting in causing or arresting this disease. This however is contrary to the opinion of all, and of most medical men of our own country, as they generally consider that a change to a warm place, where the temperature of which is not liable to any great variations, is very desirable to persons not only having a tendency to this disease, but even where it has made some advances. The late Dr. Gregory used to say that a continuance of the weather we have here in York would cause everybody to become phthisical.

"Want of exercise in the open air" also tends to favour the production of phthisis. It will therefore been found life among persons occupied in very sedentary occupations, particularly if this be accompanied with ill ventilated and overheated rooms. Sitting also for many hours daily in a po.
dition unfavorable to the function of the muscles of respiration, want of cleanliness or intemperance, or any other debilitating cause acting for any length of time, as an increase or suppression of the natural discharge, predisposes greatly to this disease. It is worthy of remark, that Butchers, Coote, Tanners, Soap-boilers, Tallow Chandlers, probably owing to a better kind of diet that persons have, as well as more exercise, seldom fall victims to Phthisis.

As however several of these causes acting singly have been said by some to be insufficient to occasion the disease in persons predisposed to it, then it is sufficiently in understanding how, when they are all combined, which too frequently is the case, it may show itself in persons free from the scorbutic diathesis. If from any cause, a failure in the nutritive process take place, the blood loses its plasticity or is rendered cachectic, the solids at the same becoming altered from their normal condition, then is the great danger of tubercle being deposited.

Admitting then that the blood does become materially changed under the circumstances just mentioned. The solids secondarily affected, there is yet something wanting to explain the reason why, when the tubercular deposit occurs on the serous membrane, the eruption, contrary to what happens, when the parenchymal structures alone are attacked, it found to consist of two parts, one capable
of becoming organized the other not so. With reference
to the exciting cause of the disease, inflammation of the
lungs, the bronchial membranes, spleen, as well as
hsemoptysis have in some instances give rise to the dis-
ease, but most men I think are agreed that they more
commonly result from the presence of tubercular matter,
inflammation however is found so often associated
with this deposit as to make it very difficult to say in some
instances whether it is the cause or effect. Cold has
always been considered as one of the most active agents
among the most obvious exciting cause of this disease.
Since the general and almost universal opinion, departs
with regard to the removal of persons to a warm cli-
mate as a sort of panacea for Phthisis, at least when the
disease is not far advanced. It is, however, rather sceptical
as to the benefit supposed to result from such a proceeding
and thinks that other things are in operation, as a change
in the habits of life to make allusion in confirmation
of his opinion, to the circumstance of cows in Paris, being
almost all subject to the disease, which are perhaps too
well protected from cold, as being kept in warm stables.
In some cases, overnutrition of the lungs by feeding too much
has been the cause of the disease.
Symptoms of Phthisis. These may divide into those that
characterize the deposition of the tubercular matter and
those that follow upon its softening. The first stages will be generally found marked by the following symptoms: dyspnea to a greater or less extent upon active exertion, this however is slight owing to the quantity of blood in the lung, being diminished, attended with a cough which is sometimes so trifling as scarcely to attract attention, and maybe either dry or accompanied with scanty expectoration of a frothy character resembling saliva which after a time at some is somewhat greenish or opaque aspect, with bubbles of air perhaps streaked with blood. This last symptom is said to be pathognomonic of Phthisis, and although we must always guard it with much suspicion, we must not forget that it also present in other diseases of the Lung & connected with Phthisis, or perhaps disease of the heart. symptoms, slight fever with an exacerbation towards night, followed by prostration perspiration and sometimes slight pain about the chest. When an expectoration is present, long before these symptoms are noticed mover life stragulation of the stomach & elementary canal with a capricious appetite will be found to have existed. If with all this, some emaciation not attributable to any other cause be present, the respiration under either condition be full harsh or bronchial, the respiration probably temporary. prolonged, the motion of the ribs being somewhat excited, whilst other parts appear healthy should doubt itself be possessed.
“Sucking inspiration” has been observed by Dr. Haldane to this as really a valuable evidence of incipient tubercle, I can say he, from my own observation, if I'm having met with it at a period of the disease. The physical signs are few in number, not so decided as might be wished though of course every addition to their number is really important. According to her experience, it is a persistent phenomenon.
local resonance be increased, there can be no doubt as to the nature of the affection. It is now, if no means have been tried before, that every effort should be used to arrest the disease. A highly prolonged inspiration, say twenty or thirty breaths, the voice on the right side of the chest is continued longer but is a diagnostic sign of Tuberculosis, much more significant when it is heard on the left, which is the side most usually affected. The same applies to the resonance of the voice on both sides. The symptom accompanying the form of Phthisis called by Louis Pasteur, "tuberculous apnoea" appears to exactly correspond to those generally at present in Phthisis generally and ought, I think, be set down as a separate form of the disease.

The second stage is marked by a great increase in all the symptoms, as belonging to the first, the cough is increased, are much worse, the expectoration which is greenish, collects in masses of more or less globular form with ragged edges, streaked with yellow opaque lines, and is much increased in quantity. This also is often streaked with blood, and some stones are seen in it. The blood appears to find its way generally into the air tubes by the process of evaporation. First, the rupture of a vesicle, this would seem to be the case for the blood actually dissecting the parts when affected by tuberculosis. The pain is also much more severe
from pleuritic inflammation occurring near the root of
the bronchi, the adhesions that form in consequence are to a
certain extent salutary, as by these perforation of the lung
is greatly prevented from taking place. Hounds this way
to the disease. The sweat which before were comparatively trifling become now colliquative, the
one appearing in some instances to alternate with the other,
and reduce the patient strength very rapidly. If auscult.
tation be now had recourse to it will be clear that the
slight râles that were present in the first stage are sup.
ceeded by loud gurgling râles with an increase of the
local resonance amounting perhaps to pectoriloquy, and
if the cavities are large the expiration will be cavernous
or amphoric, and in some cases, metallic trembling may be
heard. This will also be increased distinctness over the post
anteriorly the cavities be very large. The parietes of the chest
very thin, in which case, it might be more resonant on
percussion. The Emanation also is much greater, over the
sub-chondral space, more deformed, and this is ac-
comped with further embarrassment to the motion of the
ribs and defective expansion of the chest. The fever will
now have advanced more of the hectic form, and the ap-
petite has become bad, or anoxemia may be present. At
this stage of the disease obstructions of the mucous membranes,
particularly that of the Bowels, and air paperage accom.
The Heart of phthisical persons is much smaller than natural, owing to the diminished Nutrition it ex. ceives, combined with the insufficient power requisite to propel the blood through the lungs.
panics by Apathy and perhaps, adema of the lower extremities, and unless some complication, as pneumonia or pulmonary come on heavy off the patient, the mental faculties may continue intact or death not close the scene till the last stage of respirations be accomplished, at other times from a diminished quantity of blood being sent to the brain on tubercle forming them, more or less delirium may be present... It is not always an easy matter to diagnose the existence of this, as some of the symptoms above enumerated may not be present, but when we can do so I need hardly say that the prognosis must be unfavourable, although from the improved method of treatment, and bearing in mind what Nature sometimes does, under such circumstances, it is possible, especially if it be attended to at the onset of the disease, that a cure may result... Dr. Hutchinson's Spirometer, an instrument for ascertaining the vital capacity of the lungs, appears to have been much used with considerable success in testing the disease, at the Brompton Hospital, before the usual symptoms become evident, and in spite of the unfavourable opinion advanced by some suspecting it, thinks this instrument be competent to accomplish what it said to have done, even in slight cases, it is much to be lamented that it not more often has recourse to... "Treatment of Phthisis." If we are right in supposing
Marshy districts from their resembling in some measure warm climate, and from Lergula not being a con
mon disease, them, have been recommended by some as fit localities for the resort of phthisical persons;
hence however are very liable to produce disease of the liver and also of the spleen.
It is to be a disease of debility and to result from a derangement in the function of nutrition from malabsorption of the food, by which the blood according to Arndal is rendered deficient both in its fibrinoid particles with the serum albuminoids as greatly increased, our best effort should then be directed to the correction of this state of the system, and it will accordingly be found that certain prophylactic measures, remissive to strengthen the body generally will be particularly indicated. The first thing then required to be done is to place our patient in a spacious airy apartment at the temperature of 60.5°F and in such a situation so that he may not be subjected to any sudden change of temperature, and should it be practicable, early a removal to warmer air winter so as to enable him to take exercise in the open air. Many places about the south of Europe, the Mediterranean, south of Egypt and south west of England have long resorted to by pithical person, and not without some benefit.

Should the disease however be far advanced then is little prospect of a favourable change, but even then I think life may be prolonged by adopting these measures. The craving of warmth not the skin without blue means he has recourse to by which the perspiration from as well support the body with cold water. The skin is exposed to internal congestion, quality prevents if the case should come under treatment at a very
For the cure of this disease practitioners of this and other countries used to content themselves by using Palliative alone. Thos. says, Although we cannot hope to cure we may retard its progress. But we must bear in mind that occasionally the disease stops short without remedies or run its course unexpectedly quick. I trust however I shall be able to show from the present mode of treating the disease, we stop up the breach in many cases, of effectually putting a stop to this hitherto unmanageable and very formidable complaint.
early period, it will (long before the chief symptoms attract
much attention) be found that the chief symptoms com-
pleting of will be those of functional disturbance of the
digestive organs and it is now by paying attention to them
with a rectifying agent after the stomach isight, that
of directing remedies for their removal, we may hope
to prevent the deposition of tubercle from taking place,
or at all events to check its progress. If, however,
no attention has been paid to these symptoms other
of a more alarming nature will soon begin to mani-
fest themselves as cough with or without expectoration
kept with this the other signs before mentioned as belong
ing to the 1-stage be present, no further delay must
be allowed, but we must at once proceed to treat
the case as one of confirmed Phthisis. — Although
Phthisis has till very lately been regarded as an in-
curable disease by most Physicians, there are some
who affirm that when it exists to only to a limited
extent it may be and indeed is very frequently cured,
and have asserted farther, that if any premonitions
be devised to prevent the further deposition from taking
place it would be by no means, so constantly a fatal
disease. — Mr. Louis however is not to languish up
this point and assures us that it invariably terminate
fatally between the period of a few weeks, and several
years. — In some rare instances says he, it appear
to tend to a fortunate issue. The mention that Caesian which tuberculous symptoms were present but who remained, and the instance I have brought forward in a former part of this paper, of the undoubted evidences of cured tubercle tend greatly to support such an hypothesis. The reason why tubercle of the lungs is so easily cured is because practitioners do not detect the disease early enough. The first symptoms are always very obscure, particularly when the tubercle are deposited in small numbers, the disease will often have made incomparable progress before it is discovered to be present. This shows the great necessity of attending to the causes producing it. A great many remedies have been had recourse to for the cure of this disease, and many of a very opposite character have been vaunted as competent to grapple with this formidable disease, and as it had existed from time immemorial, there is scarcely a powerful remedy with which we are acquainted that has not been said to be beneficial or able to cure it, to say nothing about the various nostrums used by doctors, but one after another, has often a little experience given way, and yet I believe he found that the remedies really beneficial. In addition to this, already mentioned, will amount to a very few words. The first of these I shall mention is Counterirritation.
"Locomotion" is found of especial benefit in reliev-
ing the Cough. Local Congestion, for the latter of which in
the early stage, local depletion might sometimes be ne-
cessary, but we should always avoid the loss of blood in
this way, if possible, as that must always tend to in-
crease the debility that already exists; as a contrain-
timent some have recommended an occasional blister
or an Eau, rather of which may give relief, but I am
inclined to think the latter, from its liability to disturb
the rest, to a certain extent prevent the patient from tak-
ing exercise, should not be used. A liniment composed of the
Hydriodic Acid of Iodin & Alcohol sufficiently strong
when applied by a brush, to produce excitation, has been
found remarkably beneficial at the Brompton Hospital.

Our next object should be to improve the condition
of the blood. This can be only done by administering
a well regulated but nutritious diet with the tonic
regimen generally. Dr. Stuart, a Scotch Physician,
said to have been the first person who ventured some
few years ago, and to put in practice, that good living
with air respiris combined with friction were alone
sufficient to Cure Phthisis. For several instances he stated
it to have been successful. Scott Physicians before his
time treated it upon the antiphlogistic plan; of late
a practice somewhat similar to Dr. Stuart's has been
used in this country with the greatest possible advantage viz.
the administration of cold liver oil with a due proportion of
animal vegetable food, and in such an quantity as can be
readily digested. Whatever, says Phillips, may be best
within the tropics, or in the arctic circle, I believe that
in the temperate countries, especially in our own, an ad
mixture of animal vegetable food is essential to the perfect
nutrition of the body. Bread alone is sufficient to sustain
life, but it is evident that it is not sufficient to develop fully
the bodily energies, if the many proofs might be given.

That Albumen oil are mainly necessary for the formation
of the various tissues, with the addition of a certain amount of
ferric matter is fully exemplified in the changes that take
place in the contents of the egg during incubation. Milk ale
is composed of oil globules surrounded by Albumen sheets
likewise are composed principally of thee substances. The
proportions should therefore consist of these three principles
at least. The benefit arising from the oil was supposed to
be owing to the iodine it contains but that has not been fully
proved verified it is not known exactly on what its good
effects depend. It would appear from its being so easily
absorbed to set the part both of nourishment and action
in physiological subjects whose digestive powers are so weak
as to unable to convert animal food into healthy blood.
Patients generally get flesh very fast after taking it, and
in the majority of cases, it has produced a cure it has at least been of service. Although the Cod liver oil does at first generally nauseate, yet in most cases, it is taken afterward readily enough, but there are some persons who never can take it from its producing no apparent physiological action. Dr. Allon regards it in the light of a Specific. Since Dr. Bennett published his treatise in 1845 this remedy has been much used in Phthisis. In the Brompton Hospital, alone it has been tried in 542 cases with more or less benefit and the report says one of the most striking effects of Cod liver oil is its generally increase in the patient's weight. In one instance 41 pounds in 16 weeks, in another 19 1/2 lbs. in 28 days, & 10 lbs. in the next ten days. in another 29 lbs. in 31 days. An amelioration of symptoms did not invariably follow an increase of weight, though the exception were rare. An aggravation of symptoms, diminuation of weight were almost invariable coincidences. In a few the symptoms improved though the weight remained stationary or even became slightly diminished. In other cases, when the amelioration was still considerable the progress of the disease appeared to have been stayed, relapse ensued was followed by a rapid progress to a fatal issue. Cream given in stead of, or alternately with the oil has also been found useful. With, from its coming nearest to that of women, the
been given with benefit but if not continued long...

in Phthisis the fatty matter is deficient, the stomach not been able to convertStarchy compound into the substance, hence the giving oily substance instead. Should the feverish symptoms raise high it will be necessary to lay aside some remedies at a time. There accorded the diaphoretic& perhaps a stimulating dose of Castor Oil in conjunction with the feverishness. If the cough be troublesome either or some of its preparations are salicylic acid hydroxylic & will be useful, in addition to Cauterisation. Hemoptysis is likewise a troublesome symptom sometimes at a very early period of the disease. Should it occur then it is a great symptom. The patient's strength be not much reduced or attended with feverish symptoms the withdrawal of a few ounces of blood from the arm, or local depletion with the antiphlogistic remedies should be had recourse to, always remembering the peculiar state of the system in phthisical subjects. When the hemoptysis is slight or the symptoms accompanying it be those of debility, which most usually is the case, then it would be most proper to administer medicines of an astringent nature as the acetate of lead with gum or the gallic acid and dilutions thins. The Emetic of Rugby, with Co. Dinitro, have also sometimes been found sufficient. Since it exists in connection with Amenorrhoea or Plethora
the former case preparation of Iron, and in the latter depletory remedies, peculiarly called for. — For the pains in the Chest, which generally result from Rheumy Inflammation, and all of Pneumonia be present, they must be treated upon general principles, according to the strength of the patient.

Dissipation as well as profuse perspirations are very apt to occur in all stages of the disease, both however generally exist in such an extreme degree, that it often acts to weaken greatly the vital powers. When the diarrhœa is only slight, it may be relieved by the use of mild-tonics, alkalies, with or without quin. The alcholic extract of Belladonna has also been found useful as well as absorbent medicines with Confection. But should it be very troublesome and attended with pain, it will generally be found to depend upon liberation of the bowels or the rectum. The use of a mixture taken by the mouth, or as an enema, or suppository, with the vegetable astrigents as Catechu or Gallic acid or what is still better the levigate of lead with Quinine, are particularly indicated. If any inflammatory symptoms should be present, a few leeches, followed by warm fomentations to the abdomen. Perhaps a blister with mild corrosive ointment, had better be first made. If the sweating distress the patient, let him be kept cool, and administered cold lemon drink, with tincture of Quinine and delute sulphuric acid, or Chas.
lybetic remedies of the bowels are not likely to become decaying by their use. The Gallie acid with Morphine is also sometime very serviceable. Chloroform when inhaled has sometimes appeared to relieve the difficulty of breathing. And Alkalies are indicated when there is too much acidity present. Other complications as Phrenitis or Pneumonia are apt to occur, particularly towards the termination of the disease, and require to be treated upon general principles; and not unfrequently an attack of Pneumonia or Pneumonia comes on when the patient is very much weakened or a considerable discharge of blood from the lungs, in preventing death take place sometimes very suddenly.

The are other remedies beside those I have mentioned, that have obtained some celebrity in being of service, Phrenitis and the first I shall speak of is Chloroform. Chloroform when inhaled was considered by Dr. Cotterill to have been useful, but in the hands of other practitioners, it was found of no permanent benefit. It is doubly serviceable in clearing the Cough of Chronic Bronchitis, and it should not that of Phrenitis. I have reason to believe that the Reverend Mr. John Long, who fell a victim to this disease for which he professed to have a Specific, depended upon the inhalation of Chloroform, with or without Counter-irritation to the Chest, in the treatment of the phthisical person under his care.
and in many cases of the most urgent symptom.

The preparations of iron, particularly the soda, and Griffith's mixture which contains the carbonate of the potash, and sugar, which prevents it from passing into the pericardium, have given the peculiarity to the rifle of improving the state of the blood in this and other anaemic diseases, appear of considerable service, provided they be the result of pulmonal congestion or hemoptysis present. Iodine inhale or administered internally seven or mercury have been thought by some to be useful, but the latter could not be expected to be so, unless its peculiar physiological effects be developed, which, in such a cachectic constitution, as exists in Phthisic, might be followed. Other symptoms, nearly as prejudicial to health. The use of iodine is more likely to be followed by favourable results in cases of tuberculosis affecting the lymphatic glands, and is particularly recommended by Lengel and others. Indeed it is the remedy next to cod-liver oil that has appeared to do most good. Taking this remedy has been said by Sedgmen to cure this disease. Common salt, the subcarbonate of potash, have appeared also to have afforded some relief, but they are remedies from which we must not expect any great amount of good. I would however observe that the frequently given the latter in keeping cough will very soon relive, and therefore it might be some service in alleviating...
The cough in this disease.—Burnt sugar, from the
Jequirit, it contains, was thought to useful in some
forms of tubercular disease, but it has long been super-
ceded by other more favorite remedies. The Iceland
Moss, in the shape of decoction, is still much esteemed
by some practitioners as a valuable therapeutic agent
in Phthisis. Sorensen has also found useful in
allaying sickness, but it is a very disagreeable rem-
edy. The Medicinal Raspbera acts very favorably in
some cases in checking the profuse expectoration of
the latter stage and is of great relief thus afforded
Dr. Hastings of London mentioned himself that he had
discovered a cure for this disease, but further experi-
ence has proved that such is not the case. From the Brompton
Hospital report it appears in some cases to have influ-
enced.

Other diseases of the lungs as Bronchitis, Pneumonia
and Pleurisy, have sometimes been mistaken for
Phthisis but, with a little care in the examination, the
diagnosis is not generally very difficult.

In Bronchitis, with or without Emphysema, many
of the symptoms of this disease are present, but the ab-
dence of dulness on percussion of the disease not being
confined to a limited spot at the apex of the lung, but
diffused more or less throughout its substance, the gast
Resonance of the chest, as well as general prominence of
Emphysema is present, with no increase of the vocal res-
sonance and the history of the case will in the early stage
be sufficient to decide the question. But in the Bronchitis
of old people, when it has existed for a long time, will
resemble much more closely a case of Phthisis, being at-
tended with great emaciation, profuse purulent expecta-
tation with symptoms of hectic fever, and there will be the
great difficulty in distinguishing the one from the other;
besides which repeated attacks of Bronchitis will, it
is said give rise to Phthisis. This affection may
also be distinguished from Pneumonia, as the latter
disease generally come, on much more suddenly, and is
preceded with more acute febrile symptoms. The disease
is marked by great dyspnoea on inspiration accompanied
by a few expirating rale, is the early stage with great
increase of the local resonance, and is generally situated
at the base, whilst the apex of the lung is unaffected.
In Pneumonia the expectation is thick, very tenaci-
ous frequently rusty around. When however tubercles
are found in the lung, very suddenly, generally,
as in acute Tuberculosis, it is accompanied with
all the symptoms of a acute Pneumonia cannot be
distinguished from it. It is by no means uncommon
for Pneumonia when it occurs in a debilitated, constitut-
...be in one debilitated from fever to follow an accompaniment of effusion in the lungs.

Pleurisy is known from Phthisis by the dulness of percussion being situated at the most dependent part of the chest, if effusion be present; the absence of the respiratory murmurs, and in the early part of the disease by the presence of cough when the patient speaks, and friction or crepitating murmurs being audible during inspiration. The suddenness of the attack, attended with cutting pain in some part during inspiration and the symptoms of fever being more acute. It very frequently exists in a chronic form in Phthisis, particularly when the tubercles are near the surface and forming adhesions with the membrane covering the pleuritic interspace of matter into the pleural cavity. Nature is prevented from taking place sometimes however this does occur. The symptoms denoting its presence are great dyspnea and severe sudden pain on one side of the chest with amphonie inspiration followed by metallic tinkling, insupportable anxiety, with the general symptoms of Phlegmatism with Effusion. (?) Alison mentions a case in which the effusion into the pleural spaces into the lungs and was expectorated. This patient died phthisical.

When the Bronchial tubes are enlarged they present symptoms very analogous to Cancer, but their situation and general history will in most cases, better be sufficient...
to distinguish them from cancers resulting from tuberculosis.

Besides this complication, I have mentioned three or four, which sometimes we may be called on to treat. I allude to the inflammatory ulcerations that are apt to occur about the larynx & trachea, particularly in the latter stages of the disease. As these appear to be produced by the irritating matter that is expectorated, it will be quite evident that little can be done for their relief. Inhalation of vapours of water with or without the addition of a deodorant or chloride, as recommended by Mr. Toulmonde for chronic pulmonary catarrh, might possibly be of service. When aphthae appear about the mouth & tongue (which, by the way is a vegetable production) some relief is afforded by the use of the Mel Boracis or Boretius acid, largely diluted with syrup of peppermint, but as the only indication of the great disability that exists, we can expect to afford any permanent relief, unless we can strengthen the constitution by any means, which at this period of the disease, but too often baffles all human efforts, made for that purpose.