

AN
INAUGURAL DISSERTATION

ON

Pneumonia Pulmonalis

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Phthisis Pulmonalis.

This fell destroyer of humanity is no respecter of persons, committing its devastating effects upon the great, the small, the noble, the ignoble and is the great endemic of the world. From the peculiar construction of the lungs, being held together by areolar fibrous tissue it appears that they are strangely liable to the development of tubercles; more so than any other part of the human organization. This susceptibility I would say arose in part from the momentous offices the lungs are required to perform, and their liability to inflammatory lesions. By authors, phthisis has been divided and subdivided into many species. Such as tuberculous, granulated, Cancerous, melanotic, Calculous and ulcerous. In this dissertation I shall strictly confine myself to the investigation of tuberculous phthisis. Believing that it is

the only form, by passing through the different stages that can or does terminate fatally. Or can be characterized by all the true symptoms of phthisis. Then we are driven to the conclusion that Phthisis consists (truly) in the development of tubercles in the lungs. It is also notorious that these tubercles are of dull yellowish or whitish appearance. Or they may be hard translucent, shining, homogeneous bodies and not uniform in consistence; varying in size from a millet-seed to that of a pea. They seem to have quite a preference for the apex of the lungs, being often found there in abundance and nowhere else, though they may be dispersed throughout the lungs, producing great irritation—pulmonary. They are often so superficial being just beneath the pleura—that they produce irregularity of surface perceptible to the touch. The time requisite to enable tubercles

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to attain their greatest magnitude can in no-
wise be stated definitely. While in one case they
may progress so mildly that, the diseased is scar-
cely conscious that the greatest enemy to humanity
is burying its poison deep in his vitals, others
are seized almost instantaneously, the disease
runs its course in a few weeks or months at
most, and they are swept away while others
linger for years. Let it suffice to say that they
gradually increase by new accretions.
While it is true that the nature of tubercle has
been a subject of no mean analytical inves-
tigation, it is equally deplorable that no satisfactory
result has been attained. While the microscopic
constitution of tubercles before softening has been
found to be hyaline, molecules and characteristic
corpuscles. Shortly after the new accretions are
withheld from the tubercles the process of soften-
ing commences. This commonly begins in or near

The centre and advances towards the circumference
 until the entire tubercle is converted
 into a soft puttaeous yellowish mass, not dissimilar
 to pus in appearance. Though this gradual softening
 is by no means always the case. Sometimes it takes
 place very rapidly and large portions of the lungs
 rapidly disorganise. In this condition the confined
 matter begins to display its irritating properties,
 by setting up inflammation of the adjacent parts
 which terminates in ulceration establishing a
 communication between the tubercle, or rather the
 puttaeous mass, and the bronchial tubes.
 Thus there is an outlet or canal formed for
 the escape of the offensive matter and is expecto-
 rated leaving a cavity or vomica.
 The contents of the vomica are a little bloody-pus,
 tuberculous matter, and probably a slight remnant
 of disorganized pulmonary tissue. The bloodvessels in
 the immediate vicinity of the vomica are obliterated.

And thus we see these processes and carried
 on until the vital functions of the lungs
 are destroyed and unable any longer to perform
 the function of respiration and the victim
 perishes. I am aware that the above exposition
 of the rise and progress of tubercles does not meet
 with universal approbation, yet it seems to
 me the most plausible construction that the
 medical world has ever countenanced.
 From the observation of Louis it appears that
 the left lung is more liable to the development
 of tuberculosis than the right one. Next to the
 lungs in frequency, he observes that of the lym-
 phatic glands, the pleura, intestines, spleen, liver,
 peritoneum, membranes of brain, brain,
 bones, pericardium, stomach, kidneys, pan-
 creas and in fact the entire human
 organisation feels the mighty leuthen beneath
 which it is greatly oppressed.

While the lungs and the great centre of elec-
 traction it must not be passed by in
 silence that the adjacent parts are often diseased.
 Probably if there be one lesion more frequent
 than all others, it is the adhesion of the lungs
 to the pleura costalis. The liability of the
 epiglottis, larynx and trachea to take
 on diseased actions, is probably not
 so great, yet they are by no means
 free from ulcerations. The bronchial tubes
 also sympathize with the lungs and some-
 times take on diseased action. It is not
 my intention to enter into a deta-
 iled investigation of the various
 organs, yet we shall remark
 that the liver often assumes
 a fatty transformation
 with increased dimensions.

This probably is not so frequent as represented.

First stage

The symptoms characteristic of this stage are so mild that they scarcely ever attract particular notice or excite the suspicions of the patient. Among the first probably, is a slight cough which the patient almost always refers to having caught cold. Though I would not be understood as asserting that this cough is always present in the first stage. The cough, for the most part, is attended with frothy expectoration, being at first clear, and afterwards assuming a greenish tinge, and occasionally slightly opaque. Acute pains between the shoulders are not unfrequent occurrences. Pains in the chest and side with derangement of the digestive functions, with different degrees of temperature and occasionally night perspirations with diminished strength

and an advancing proclivity towards emaciation. The pulse is generally accelerated.

Second Stage.

This stage now glides in almost unperceptibly or may usher in with a profuse hemorrhage. The febrile symptoms now increase probably on account of the putrescent matter of the tubercles producing inflammation of the surrounding parts, being obstructed in its exit. The symptoms are now generally aggravated. Acute pains in the chest, heat, thirst, loss of appetite, furred tongue and general debility. The most unequivocal sign of the second stage having set in, is the purulent expectoration, in compact masses, of a green opaque color, with small lumps of soft tubercles. Cough is increased, with night-sweats profuse and occasional dyspnoea. Hemorrhage not so frequent.

The menses at some period during the disease are suppressed. Nevertheless patients often in this stage seem to improve much by a faithful and well timed administration of remedies discreetly prescribed. So much so, that prominent symptoms seem to disappear and for a time the patient actually seems to be improving and has gained strength and flesh and fancie he is doing remarkably well. But this delusive calm is often followed by a wild tornado which more than compensates in the way of rapid progress for the amelioration of the previous symptoms. The appetite is irregular. Diarrhea is a frequent attendant upon this stage and often very exhausting. Nausea and vomiting are not frequent attendants upon this stage, though not always absent.

Dr. Thompson has given to the medical world a symptom which he considers an unmistakable indication of tubercles in the lungs or a tuberculous state of system. This is indicated by "a reddish streak or margin at the reflected edges of the gums, having in decided cases a vermilion tint." Haemoptysis is often an alarming symptom, often requiring medical aid to check its progress and is a symptom of both stages or it may be present in the first stage and absent in the second and vice versa. Towards the fatal termination oedema of the extremities intervenes with redness of the tongue. The patient usually is able to sit up a part of the time until near the approach of death, at which time the weakness becomes so powerful that,

expectoration ceases, Cough discontinues, phlegm accumulates in abundance in the lungs and the vital spark is blown out on account of the accumulations obstructing the passages of the respiratory system. Generally the intellect remains brilliant until the last ebb of life has subsided. Yet this is not always the case, occasionally for the last twelve or twenty-four hours the mind is clouded, the imagination wild and often startling. With a recapitulation of a few of the more prominent symptoms of *phthisis pulmonalis* (while I have omitted many of the minor symptoms) I shall bid adieu to the the symptoms for the present. The prominent symptoms are Cough, dyspnea, hemoptoe, pains, Fever, frequent pulse emaciation, night sweats and debility.

Causes.

There is a state of system denominated tuberculous diathesis or predisposition. And it will be noted that a deposition of tubercles in the lungs is not the entire foundation of phthisis, but there must always be a morbid state of system antecedent to the development of tubercles. Did it not precede I can see no possible chance for their development. I further believe that this state of system is identical with the well known scrofulous diathesis. Although I do not profess to be able to explain the exact nature of this diathesis. While some have conjectured that it was owing to a relaxed state of the tissues, others have been equally enthusiastic in imagining that it was owing to an undue proportion of red corpuscles in the blood.

It is unquestionably true that there is a morbid state of system which I am pleased to refer to an impure state of blood.

There can be no question as to inheritance being the most influential predisposing cause. That it is hereditary no sane man will deny, yet that it is hereditary in every case and ~~can~~ not be acquired, is a question that I have no great desire to controvert, yet as I am always "for or against the mill dam" I shall advocate the unpopular side; that it is hereditary and no mistake. Though occasionally cases of phthisis occur which at first sight would seem to invalidate this conclusion. Yet if their parents never manifested any symptoms of phthisis, by a careful examination of the history of the family, find that an aunt, uncle, grandfather,

Grandmother or both of them have been the victims of the formidable malady. We often observe that one phthisical parent entails the disease upon the offspring, while if both be affected it is almost certain. Should they immediate descendants escape its developed form, that is no reason why they have not retained the predisposition and are enabled to hand it down to their offspring. Yet it is a great proof that it has been nursed in the system in its latent form, only wanting an exciting cause to arouse its stupidity and mow its victim down. If the father be phthisical, of the children, the girls are liable to a greater degree and vice versa. Cold damp climates have been accused of being prolific in the production of phthisis. I maintain that any one who has a hereditary taint

Or a predisposition, may have tubercles developed from any exciting cause capable of irritating or inflaming the lungs or producing too great a flow of blood to those organs or an unusual secretory effort. There are many other causes less significant in their character and influence accused of having exciting influences: such as the inhalation of acrid gases and over exertion of the lungs, external violence, tight lacing, and many others which I have not space to mention. Age has its influence. There seems to be a remarkable exemption until after puberty. The system after this period does not need such an extensive supply of nutrition to supply the growth and repair of various organs, therefore it is reasonable to infer that there is a surplus elaborated and who knows but that this

Surplus may aid in the deposition of
 tubercles in the lungs, in those predisposed.
 Probably the most prolific ten years of phthisis
 is from eighteen to twenty eight, though
 age can not be looked to as an
 exemption. Sex has its influence. Appea-
 ring in women sooner than in men. This
 may be easily accounted for when we reflect
 that women arrive at the state of pu-
 berty sooner than men. Women are
 more liable to the development of
 tubercles than men. This arises from being
 more delicately constituted and hence more
 liable to the lesions of relaxation and debility,
 as well as their more sedentary habits, their
 greater sensibility, their greater consumption
 dietetics, being more readily affected than
 men notwithstanding the
 greater exposure of the latter.

Occupations requiring Confinement within doors have an injurious influence, while those requiring a vigorous exercise in the open air are less exposed. Different diseases have been accused of ushering in this disease. Disappointment in affections or business may exert an injurious influence upon the system, through the medium of mind by prostrating its energies and debasing its hopes. I have omitted many minor exciting causes, while I have located the main cause in the blood, unequivocally asserting its hereditary diathesis in every Case.

Contagion.

Is a dogma that deserves the universal disapprobation of the medical profession, yet there are tyroes in the

profession who advocate its claims to truth. It needs no elaborate argument to disprove all such preposterous and absurd notions. I shall pass it by in silent contempt as not worthy of the slightest exposition.

Diagnosis.

Is by no means difficult except in the first stage. And in this stage there scarcely need be a doubt, if there be much emaciation and a persistent cough with or without a mucous expectoration.

If these symptoms can not be accounted for by a loss of appetite there is great grounds to arouse our suspicions that the patient is laboring under the tuberculous diathesis. And should to these be superadded pains in the breast and between the shoulders accompanied by an increased pulse

with general debility, we may view it as almost conclusive. In this condition should haemoptysis occur the matter is set at rest. The invaluable adjuncts of percussion and auscultation may be summoned to our aid, and will shed a halo of light in a dark place, in assisting us in our diagnosticating efforts. On percussion if there be much dulness of sound in the subclavicular region, and an unusual respiratory murmur, with much vocal resonance, linked with the above symptoms our suspicions may be turned into affirmations. Dr. Beau is of the opinion that he has discovered a symptom vastly rich in diagnostic value: which is tenderness on pressure, with the finger in the anterior intercostal spaces, near their sternal extremities. With a judicious discrimination

phthisis should not be blended with any other disease, bearing in all probability the greatest resemblance to Bronchitis. yet the physiognomy of bronchitis is quite different from that of phthisis, as well as quite different results may be obtained from the great interpreter - Cuscultation.

Prognosis.

This is easy. In the great majority of cases it is most unquestionably unfavourable. Be it far from me as assenting that phthisis is always fatal. There are cases on record of cures being effected or taking place spontaneously. While evidence from post mortem examinations is abundant, that at some period during the disease tubercles are capable of undergoing favorable modifications. Much may be expected from a well timed treatment.

Treatment.

The first indication is to prevent, if possible, or further deposition of tubercles as they run their course when formed in defiance of skill or remedies. The predisposition should be connected as far as possible, the lungs and system guarded from injurious influences. While the tuberculous diathesis consists in a pulling down of the general tone and vigor of the system with a depreciating character of the blood, we should be careful to address suitable remedies for the restoration of the solids and correct all lesions of the circulatory system.

These ends may be accomplished, in a good degree, by a free exercise in an open and pure air, protecting the patient by flannel next the skin, and woollen apparel warm and thick. Riding on horseback is a good mode of exercise. If a sportsman, let him take to the mountain.

The residence of the phthetical subject should be in a country of uniform temperature and dry. The interior of Georgia, Alabama, and Florida have been recommended as suitable. Santa Cruz, Cuba, South Eastern parts of Spain, and the prolific Egypt have all enjoyed some notoriety. Sea voyages may be indulged in, though they should be short or else the fatigue will more than counteract the good effects.

The Atlantic enjoys more renown than all other waters, probably on account of its more favourable climate.

A residence near the sea shore must be detrimental, notwithstanding the opinion of great lights to the contrary. I would have no scruples in directing a patient to leave such a locality and take up his abode

in the interior where he would be
fanned by the gentle zephyrs, rich
with the fragrance of balmy flowers,
impregnated with the exhalations from
the tender foliage, amid the flavoured
beautiful pine forests. Many medi-
cines have been recommended in the
treatment of phthisis, some have proved
ephemeral, others have entered the frail
state of longevity and fallen into dis-
repute. Some have been puffed into notice
with the false claim of a specific, while
others only ask the mild appellation
of adjuvants. The diet must be looked
to by the physician. It should be nutri-
tious but not stimulating. It may
consist of farinaceous substances, eggs,
oysters, fish, milk and delicate meats.
At times fruits and vegetables may be indulged.

The special symptoms - haemoptysis, Cough, pectoral pains, frequent pulse, night sweats, vomiting and diarrhea must be promptly met by the well-known remedies applicable to each case, which I have not space to mention.

The tone and vigor of system, at all periods, must be sustained. This may be accomplished by a faithful exhibition of Cod-liver oil. It has done much for the alleviation of suffering humanity and deserves the appellation of the great life protractor.