

AN
INAUGURAL DISSERTATION

ON

Pneumonia.

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Pneumonia.

Pneumonia is a term used to designate an inflammation of the substance of the lungs.

The inflammation may be confined, or limited to a very small portion of one lung, and is thought by some writers to attack the lower lobes more frequently, than the upper, however, other writers suppose that this is not the case.

This discrepancy may be reconciled from a consideration of the fact, that some authors have arrived at their conclusions from post-mortem examinations exclusively;

while others have included those cases in which the disease terminated favorably, in addition to those that terminated fatally.

And I believe it is a fact generally conceded, that the disease is more fatal when the ~~upper~~ the lobes are implicated, than when it is confined to the lower lobes exclusively; hence post-mortem examinations, ~~alone~~ considered would very naturally lead to the conclusion, that the upper lobes were most frequently attacked.

The inflammation, not unfrequently however, after having been excited in one portion of the lung, spreads, or extends

to other portions. For example; when the lower lobe becomes inflamed, not unfrequently it extends until the middle, or even the upper lobe becomes implicated; thus, involving the whole lung, indeed any portion, or portions, of one, or both lungs may be involved, either consecutively, or simultaneously.

From what has just been said it will be evident, that there may be very different pathological conditions existing in the lungs, at the same time.

So far as the locality of this disease is concerned; I believe it is confined chiefly to the

more temperate regions of the earth. I am not aware, that it exists at all, either in the polar, or tropical regions.

The reason perhaps, why pneumonia does not make its appearance in those regions, is in consequence of the more equable temperature of the atmosphere. Alternations of heat and cold, especially in connection with a moist atmosphere seems, to be favorable for its production; for in winter and spring, when the weather is generally most capricious, we find the disease most prevalent; notwithstanding, we are not entirely exempt ^{from} the disease at

any season of the year.

There are three well marked stages in pneumonia corresponding to different degrees and periods of the inflammation.

The first stage or condition is that of engorgement, in which the substance of the lung, or at least a portion of its substance is gorged with blood, or bloody serum. It is of a dark red colour externally, and crepitates less under pressure than sound lung, ~~does~~, does. We feel that it contains more liquid, than air, in its cells; and is heavier and more ~~inelastic~~ inelastic than

natural. When it is cut we find it red, and a quantity of reddish, frothy serum flows from it. It is more easily torn, and somewhat resembles the spleen, hence the term splenization. In this state of engorgement the nucleus membrane of the small bronchial ramifications is of a deep red colour, partaking of the inflammation also.

If the inflammation continues the lung undergoes a further alteration, and presents the following characters, which constitute the second stage. It is still red-externally, and

within; but it will not crepitate under pressure; it contains no air; consequently it sinks in water. When an incision is made through a portion of lung in this stage, the cut surface presents a red colour, sometimes slightly streaked with some traces of a thicker, and more yellowish matter, the first indication of commencing suppuration. Under pressure there still flows out some red fluid, but it is less in quantity than in the former stage; and is not foamy. It is more dense and solid; also more friable than before, and very much resembles the liver; hence this

stage is called that that of hepatization.

The third stage is that of suppuration, or grey hepatization. It consists in diffused suppuration of the pulmonary tissue. The colour of the lung is of a greyish-yellow; and is still solid and smooth, but exceedingly friable. The diffused matter is converted into pus, and not unfrequently presents the appearance of an abscess; around which the diseased lung sometimes presents a gangrenous appearance. However, gangrene is a very rare result of ordinary pneumonia, though it does occasionally occur.

The three different conditions

above described are sometimes, but not always distinct. They are in fact often more or less intermingled. Thus, in the midst of a congested portion of the lungs, some spots of red hepatization may appear, and in the midst of the latter some spots of grey hepatization; and the existence of all these three conditions may ~~may~~ be simultaneous.

Pneumonia is frequently complicated with pleurisy, and is perhaps invariably accompanied with bronchitis; which disease most generally immediately precedes it.

In a great majority of the cases the morbid phenomena

are confined to one lung; and the right lung is much more frequently affected, than the left. The reason however, why the right lung is more apt to take on inflammation than ~~the~~ left, is more than I am able to explain.

There are different varieties of pneumonia, dependent upon the different diatheses, or idiosyncrasies. Thus in the phlogistic diathesis, we have acute, or inflammatory pneumonia or if the malarial diathesis be present, we find the symptoms presenting an appearance, more, or less periodical, and when

it is associated with a low,
or astheric state of the system,
it presents many phenomena
common to typhoid fever,
consequently it is termed
typhoid pneumonia

Symptoms. The
signs of pneumonia may
be divided into constitutional,
and physical.

The constitutional signs make
their appearance generally with
a decided chill followed by
fever; short hacking cough,
pain in the side, breast,
or back. These may be
more or less violent. If the
^{pain} be acute, we would be

led to suspect that the pleura was involved, as the pain of the lungs uncomplicated is generally dull, and may be referred by the patient to some other organ. Respiration is short, quick and laborious.

The cough at first is dry, and attended with an expectoration streaked with blood, which doubtless emanates from the inflamed mucous membrane of the small bronchial tubes. As the disease advances the sputa became quite viscid, rather scanty, and a brown, or rust colour. This arises from the uniform mixture of blood, and is

easily distinguished from the striated appearance of the sputa in acute bronchitis.

Oppression in the thoracic region is experienced, and the patient generally prefers a supine posture.

Headache is not an un- frequent attendant of this disease, owing to the blood not being properly airified, and in the more advanced stages of the disease the face is often flushed, and bears a darkish hue, sometimes circumscribed, and confined to one cheek. The latter appearance is generally a sign that suppuration has begun, or is about beginning.

These symptoms may be so obscure as to baffle the ~~phy~~ practitioner in his prognosis; he may however, by the aid of the physical signs, be enabled to a considerable degree of certainty, to tell the exact condition of the lungs.

The physical signs in the first stage are dullness on percussion, and a diminution of the vesicular murmur, the crepitant rales may soon be discovered if the sputa are of a brick-dust hue. This crepitation can be made more distinct by the patient taking a deep inspiration, forcing the air to penetrate the

vesicles, bursting the little bubbles, formed of mucus in these small passages, which gives rise to the crepitation, and resembles closely the crackling sound produced by rubbing the hair between the thumb and finger, near the ear. There can be no doubt of the engorgement of the lung in this stage of the disease, and is an evidence that the entire lung has not yet passed the first stage.

In the second stage a marked difference may be observed. The crepitant rouches is not heard, nor is the vesicular murmur present, the lung

having undergone hepatization, the air cells being obliterated, the large tubes remaining open, give dullness on percussion, resonance of voice (broncophony), and bronchial respiration. The latter more especially marks the second stage of the inflammation. Another character of this stage is a peculiar vibratory motion which, can be felt by placing the hand on the walls of the chest, when the patient speaks or coughs.

The third stage cannot be distinguished by the physical signs. Should an abscess have formed however, and ^{opened} into the bronchia a gurgling rale, if

the cavity contain a liquid, pectoriloquy with cavernous respiration, if it be empty will, be the diagnostic sign.

The above symptoms, as a matter of course, are considerably modified by the different diatheses, or peculiarities of constitution in which it is met with.

Treatment. This

should be accommodated to the various stages of the disorder; as well as to its variety.

In a case of pneumonia per se, in a good constitution of the phlogistic diatesis, ~~it~~ it would be proper to bleed from the arm early in the disease,

or it might be proper to repeat the bleeding a second, or even a third time: the object being, not only to check the inflammation by depriving the blood of its fibrine; ~~but~~ also to diminish the quantity of the circulating fluid for a time, thus giving the lung a chance to recover its wanted tone.

After proper depletion with the lancet, it would be proper to administer some eight, or ten grains of calomel, combined with ~~some~~, ^{or} eight, grains of jalap. This should be followed by tartar emetic ⁱⁿ nauseating doses.

If the symptoms did not give

appear to be giving way in the course of four, or five days under this treatment, I would then resort to small doses of calomel, anodynes, local depletion, blisters, &c. A light ~~plus~~ farinaceous diet should also be prescribed.

When the disease is found in connection with the malarial diathesis, general blood letting is con-traindicated. It may be proper however, to extract blood from the chest by cups, or leeches. The bowels should be evacuated ^{with} calomel, especially if there were any signs of bilious derangement. This should be followed with quinine in doses ^{of from}

Ten to twelve grains, between the paroxysms, ~~Tartar~~-emetic, calomel and opium should be used if necessary.

In typhoid pneumonia, general blood-letting is not at all admissible, except it be at the very onset of the disease. Cups, or leeches may be applied to the chest, small doses of tartar-emetic, with a little dovers powder, ipecac, calomel, turpentine, blisters &c. The bowels should be kept in a regular condition; by the use of opiates and astringents if there should be a tendency to too free action, and laxatives if there should seem ed to be too much torpor