AN INAUGURAL DISSERTATION ON

Pneumonia

SUBMITTED TO THE
President, Board of Trustees, and Medical Faculty
OF THE
UNIVERSITY OF NASHVILLE,
FOR THE DEGREE OF
DOCTOR OF MEDICINE.

BY

E. V. A. G. Good.

OF

North Carolina

1859

MEDICAL JOURNAL OFFICE,
NASHVILLE.
Pneumonia

The above is the most universally accepted name for inflammation of the spongy tissue of the lungs, the essential organ of respiration, which is double and occupies the two sides of the chest. When this compressible and dilatable structure is inflamed we call it Pneumonia.

There are several varieties of this disease, which are founded upon the part of the organ affected and associating diseases. Character of the fever, general state of the system &c. The inflammation may occupy a considerable extent, embracing a whole lobe or lung. This is the common form of
The disease, though, both lungs are sometimes inflamed, it is then denominated double-pneumonia. Again when associated with a low febrile condition of the system it is called Syphoid-pneumonia. Finally common or lobar pneumonia may be of long or short duration; I only propose speaking of this form and of it, as it prevails in Western North Carolina.

Common or Lobar Pneumonia. There are three well-marked stages in the acute form of this disease. First, congestion; second, inflammation, and thirdly, suppuration.

Repeated post-mortal examinations have discovered the lung.
In the first stage of this disease, in a state of congestion, or engorgement. Its colour is that of a deep red; it is more compact and heavy, but less viscid than in health. Notwithstanding its increased density, it still floats on water. When cut and under pressure it exudes a bloody and somewhat frothy serum. The extravasation has not yet entirely obliterated the air-cells. They still contain air.

If the disease be arrested in this stage, the lung resumes its healthy action and appearance, but if not it passes into the second stage, hepatisation. We now find the lung more congested and of a deep-red.
or reddish-brown colour. Effusions have taken place into the smallest bronchial tubes, cellular tissue &c. The matter effused is either blood or fibrine. The lung has become solid, in so much that it no longer floats but sinks in water. When cut into, it presents a granular appearance. It no longer emulsifies from pressure, but, when pressed emits a bloody serum.

In the third of supplicative stage the lung undergoes an alteration of colour; it presents a reddish, yellow, straw, or drab; or a grayish hue; sometimes mottled with red. It is softer than in the second stage and is full of puriform matter. The gray pus shows itself upon the cut surface.
of the lung in minute drops. When crushed between the fingers, or otherwise, it is reduced to a pulp.

Symptoms, Course, and Termination of Common Pneumonia.

It is most generally ushered in, with a decided chill, followed by fever, pain in the back, the side or chest, which is sometimes dull, and sometimes acute. This dull pain is truly a lung pain, and in acute cases we infer a participation of the pleura. In acute cases when both lungs are involved, the pain may be felt on both sides, or it may be concentrated to the region of the sternum. The breathing is always quickened, and at the same time there is almost
always a feeling of oppression which is aggravated by vocal efforts. 

Cough is another attendant symptom in the course of this disease, and is more or less painful. It is at first dry, or generally so, but in a short time, often in one day, a viscid, tough, semi-transparent matter is expectorated. Which is, or soon becomes, stained with blood, so as to give it a red, yellow, or brick-dust colour according to the quantity of blood. This particular coloured expectorated matter is one of the most reliable diagnostics in pneumonia. 

Fever is always a prominent symptom in divine cases.
attends with extreme headache, from which the patient seemingly suffers more than the pain in the breast. Delirium occurs occasionally, and is an unfavorable omen generally.

During the fall, winter, and spring of 1857-8, I saw between thirty and forty cases of pneumonia, nearly all of which had a circumscripted flush of a dark or deep-red hue, on the cheek corresponding with the affected side. I never noticed this distinct flush previous to the time I speak of. The experience of Dr. Tracy, a physician at King's Mountain, N.C., and by the way a man of extensive practice and twelve or fifteen years—
experience corresponds with the above
Physical signs are very important in the diagnosis of this disease.
In the first or congestive stage, there is slight dullness on percussion and diminished respiratory murmur, but at an early period the characteristic crepitant bronchus is heard. Sometimes it is only heard by deep inspirations, and on the other parts of the chest the respirations may be healthy. The crepitant bronchus is produced by the separation of the walls of the vesicles in inspiration, and very nearly resembles the sound given by rubbing a lock of hair between the fingers near the ear. As the disease advances crepitation ceases, and the respiratory murmur is no longer heard.
No sound is given off at all or only that of bronchial respiration, which is characteristic of the second stage or hepatization. There is also a stronger vocal resonance in the second stage. If the disease be arrested in the first stage, the crepitant rale gradually subsides, and the healthy murmur returns. When hepatization is fairly established and resolution takes place, bronchial respiration passes off, by degrees, and crepitation generally returns, but soon gives place to the healthy murmur. This is in connection with the healthy resonance on percussion, speaks loud for the restoration of the diseased lung.

The third stage cannot be so well distinguished at all, it presents the same flatness on percussion and the
Same respiratory sounds. If the disease yields to treatment in the congestive stage, which it sometimes does, the pain disappears; the expectoration becomes more copious. The frequency of the pulse with other febrile symptoms diminish, and the tongue cleans. Thus favorable symptoms begin to develop themselves the second, third, or fourth day. Convalescence may be established in less than a week.

In a majority of cases the first stage comes into the second, this happens at various periods, but generally in from one to three days. The change is not marked by any very obvious symptoms; the breathing may become more difficult and hoarseness and the countenance may assume a duller expression. Instead of an
increase of pain it often diminishes. If the disease is not now arrested it passes into suppuration; this also occurs at various periods, but, most commonly, sometimes in the second week. We cannot distinctly mark the accession of the third stage; but generally the difficulty and frequency of respiration is increased. The pain is not so severe, the excretion becomes purulent, or assumes a dark colour, or ceases altogether, in consequence of debility of the patient, disabling him to throw the matter off. The countenance becomes pale and haggard, the pulse extremely feeble and rapid, the skin is bathed in a cold sweat and death is the result. The mind
generally remains clear to the last. The above is often the course in fatal cases, but the disease is apt to take a favorable turn in the second stage and generally at the end of a week or four or five days now will establish convalescence; although the case may be protracted from some symptom failing to take its leave.

Diagnosis.

Pneumonia may be confounded with several diseases, only one of which I shall name here. And that is bronchitis. In cases of bronchitis extending to the minute ramifications of the bronchi, pneumonia is very closely resembled. The expectoration, though sometimes tinged with blood, never has the viscous, brick-dust character of the spittle of pneumonia.
These diseases are occasionally combined, and it is frequently almost a matter of impossibility to distinguish them.

Prognosis

In common or lobar pneumonia, occupying only a portion of one lung, in an otherwise healthy person and uncomplicated, we may reasonably expect a favorable termination. Cases of this kind will often get well even without treatment. This disease is generally mild between the ages of forty and twenty-one years. In persons over fifty, and in advanced age, this is a dangerous affection. The danger is measured by the extent of inflammation. In tuberculous subjects or those of a scrofulous diathesis pneumonia—
Is sometimes attended with a copious tuberculous deposit, which under these circumstances may be considered fatal, and often runs a rapid course.

Causes

Diseases of the weather are the most frequent causes of pneumonia. Sudden exposure to cold when the skin is warm and moist often induces it; more especially if the subject is laboring under a cerebral affection at the time of exposure.

There are other causes, as direct violence, poisonous inhalations, excessive use of the voice, etc., in short, any thing that determines the blood to the lungs may produce pneumonia.
Treatment

It is almost always necessary in the outset to give a full dose of Calomel, followed in a few hours if thought necessary by Oil or Salts. We may now commence with Speeae, in nauseating doses, and give it every three four or five hours, as the case may be. 

Gips, mustard plasters, pepper poultices and stimulating liniments, etc., may be employed as counter-irritants, directly over the pain or inflamed portion of lung. If the patient be restless, the cough distressing, or the bowels disposed to act too freely from the use of the Speeae, add from 1 to 1/2 of a grain of Morphine to each Speeae powder, and continue as before. There should be an expectorant
= used. The following makes a very good one. Syrup of Squills 1 oz. 
paragonie 1 oz and Spirits of Nitre or Spirit. of Lobelia 1 oz. From 20
or 10 drops of this mixture may be taken every three or four hours
between the powders. Har subtle should be used, with the addition
of a little niter, if the urine is high
coloured. Cold water should be
allowed all the time. If the symp
ptoms are not modified and the pain
seems to be permanently lasted it
would be well to apply a fly-plex
bitter to the chest, if there is not
too much arterial excitement. Though
a great many cases can be relieved
without blistering. When the blister
is drawn, it is often necessary to
make another addition to the space.
- and it is this, add from one to three grains of Lumina to each dose of the Speece. The better plan is to have two sets of powders, one composed of Speece & Morphin, the other of Speece Morphin and Lumina. The former being given if the skin acts pretty freely or becomes moist. Then commence with the latter, and if the skin again becomes dry give the Speece alone or combined with Morphin. I have known many dry tongues to become moist in a short time, and remain so, under this treatment. The above with but very little variation was the treatment of those cases that I spoke of seeing in the early part of this dissertation.
There was not a vein opened in either of them, nor a grain of tartar-emetic administered nor one of them salivated, and yet they all got well.