

AN
INAUGURAL DISSERTATION
ON

Pneumonia

SUBMITTED TO THE
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BY

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OF

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To The
Medical Faculty
of the

University of Nashville.

This Dissertation on Pneumonia is
most respectfully Dedicated to
a Testimony of respect for their
great Professional Talents - as
well as their Kindness as a Students
friend.

By the Author.

Pneumonia.

As the lungs are the seat of Pneumonia, I will give a description of them, before entering into a Treatise of this disease.

The respiratory organs are bounded by the Sternum in front, by the ribs and inter-costal muscles on either side, by the dorsal vertebrae and ribs behind, and by the diaphragm below.

There are two lungs; situated one on either side of the Thorax; and are covered by a serous membrane called the pleurae.

Each lung is divided into lobes, the right into three, the left into two lobes. The lobes again divide and subdivide into lobules, the lobules of each lobe communicating freely with each other, but not with the lobules of the other lobes. Each lobule is penetrated by a bronchial tube.

The parenchyma of the

lungs is composed of an immense number of air cells, blood vessels and lymphatics; and is well supplied with nerves.

Pneumonia is inflammation of the parenchymatous structure of the lungs.

This disease may affect both lungs, or only one, or it may affect only one lobe of either lung; and thus different names are applied to this disease.

When both lungs are affected it is termed double Pneumonia, when one it is termed single Pneumonia and when only one lobe is affected it is termed lobar Pneumonia.

This disease most frequently appears in the lower portion of the right lung.

It is very frequently complicated with diseases of the respiratory tubes. It seldom if ever.

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occurs mettened with Bronchitis or
Pleurisy.

Causes.

Exposures to the vicissitudes of
the weather and the most common
causes of Pneumonia: such as
long and continued exposure to a
noisist atmosphere; exposure of
the body to the damp earth, the
sudden transition of the body
from a warm to a cold temper-
ature. Various other causes of
this kind will produce this
disease. Diseases of the other
respiratory organs may termina-
te in the lungs and thus produce
this disease. viz Bronchitis

It is a fact worthy of notice
that persons who have once been
affected with this disease are
naturally predisposed to its
effects.

Laborers suffer most frequently from
 this disease as they are more ex-
 -posed to the vicissitudes of the sea-
 -son than any other class of
 persons.

This disease most frequently
 appears in the months of winter
 and spring, it seldom if ever
 occurs in the months of summer.

Pneumonia very frequently
 appears in the United-States es-
 -pecially in the Northern States,
 and in all cold temperatures
 yet seldom occurs in warm
 climates.

General Symptoms.

This disease is most frequently
 ushered in by a chill, which is
 followed by fever, and the fever
 is prolonged throughout the extent
 of the disease.

The pulse is very variable, gener-

ally quiet & full and bounding, yet sometimes when the inflammation is intense, it is remarkably small.

After the chill has passed off the fever, in combination with the other symptoms, viz pain, cough, expectoration and dyspnoea gradually make their appearance.

Pain is not invariably yet generally present. The pain may extend over the whole, or only a part of the thoracic parietes; the extent of the pain being in proportion to the extent of the inflammation. This symptom is increased by coughing, changing of posture, pressure over the inflamed lung, &c.

The intensity of the pain is owing to the ^{point} organ affected, the nearer the inflammation is to the pleura, the more intense is the

pain; The pain is generally very slight when this disease is not complicated with Pleurisy.

Cough is almost invariably present. This is not a very alarming, yet an annoying Symptom to the patient, often giving him much pain.

Expectoration

There is little or no expectoration at the commencement of this disease, but the sputa in a few days loses its characteristic appearance, and becomes more viscid, and of a slight yellowish color; and this again gradually assumes the characteristics of Pneumonic Sputa - which is of a viscid dust color, and very viscid. As the disease progresses the sputa again changes its character, ^{and becomes} more thin and of a deeper hue, and is then called purine Juice sputa; and if the disease

reaches the third stage the sputa becomes of a dirty dark gray color, dark or greenish according as disorganization or gangrene of the lungs supervenes. The latter has an offensive odor sometimes filling the room making it extremely unpleasant, ^{to} the attendants in the patient.

Dyspnoea invariably accompanies severe cases of Pneumonia. The respiration is quick and hurried. Sometimes increased to one hundred and even one hundred and forty per minute. It is in proportion to the extent of the inflammation, and marks the progress of the disease with invariable precision.

Delirium indicates the impurity of the blood, causing irritation of the brain. The degree of the delirium is in proportion to the extent of the inflammation of the lungs, and exists in marking the advance of the disease.

Pathological Anatomy.

As the Pathological Anatomy of this disease is very intimately connected with the physical signs, I will give it, before giving the physical signs.

This disease is very properly divided into three stages. The first is that of Engorgement, the second is that of red Hepatization, the third is that of gray Hepatization or gray softening.

In the first stage the lung is engorged with bloody serum.

The parietes of the air cells are covered with viscous mucus, but are not entirely obliterated. The affected portion of the lung is of a pinkish hue, and if cut a frothy serum will exude. It is much heavier than when in a healthy condition, yet does not sink readily in water.

In the second stage, or that of Hepatization, the lung

is solidified. The vessels are perfectly occluded. Its cut surface has a granular appearance, resembling the liver in appearance hence the term Hepatization. It is less tenacious, and much heavier than it is in its natural state, and readily sinks in water.

In the Third stage or that of gray Hepatization, the affected portion of the lung is perfectly organized. Its cut surface is of a grayish color. Hence the term gray Hepatization.

Physical signs.

If the ear be applied to the chest of a person in perfect health, a sound is heard, which resembles that produced by the passing of wind through the tops of trees.

This is the vesicular murmur.

If the ear or stethoscope be applied to the chest of a person

in the first stage of Pneumonia a sound is heard differing much from the vesicular murmur. It resembles the sound produced by rubbing coarse hair between the fingers close to the ear, or the crackling sound produced when salt is thrown on fire. This sound is termed crepitation. The plates of the air cells are covered with a viscid mucus, which causes them to adhere to each other, and the air during the act of respiration, in making its passage through the cells, causes them to separate, and thus produces this sound termed crepitation.

There is but little evidence given by percussion in this stage of the disease. There is a slight diminution in the resonance.

In the second stage of Pneumonia, the sound produced on per-

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-cussion is dull. If the ear or Stethoscope be applied to the chest, a sound is heard which differs essentially from crepitation.

The sound heard resembles that which is produced by blowing through a tube.

The lung is engorged with bloody serum, which prevents the air from entering the lungs; and thus during the act of respiration, the air in passing through the bronchial tubes, produces this peculiar sound, termed Bronchial respiration.

The sound produced on percussion in the third stage differs but little from that produced in the second. It is still dull, but more flat, than in the second - The sound heard by auscultation, resembles any sound that may be produced by blowing through a tube into a vessel containing a fluid of variable consistency. Dry or the moist R-on-chi may be heard in this stage.

Terminations.

This disease may terminate by Resolution, by diffuse suppuration, by abscess or by gangrene of the lungs, or it may run into the chronic state.

In the first stage when this disease terminates by resolution, the physical signs change; crepitation ceases and the vesicular murmur is again heard. The sputa is changed from a brick dust color to a yellowish mucus and gradually becomes of its healthy consistence. The general symptoms gradually disappear, and the patient in a few days is convalescent.

When this disease terminates by resolution in the second stage, similar changes take place to those described in the first stage.

Bronchial respiration is changed to crepitation, and finally to vesicular murmur. The sputa is changed from a red to a brick dust

color, and is gradually deprived of its color until it resumes its natural characteristics.

The Termination in the Third Stage is by Diffuse Suppuration, by Abscess or by Gangrene of the lungs. The lung becomes disorganized and may be easily reduced to a pulpy mass. The expectoration is of a grayish color. Abscess of the lungs is of very rare occurrence, and also gangrene. When the latter occurs the expectoration emits a very offensive odor. The Dyspnoea is often very great; the patient sometimes dies from suffocation.

Chronic Pneumonia is of very rare occurrence; it may exist either with or without expectoration. Some of the general symptoms of acute Pneumonia are invariably present. The breathing of the patient is generally much oppressed.

This disease may exist for months and even years, without undergoing much change; and yet patients may recover from its effects.

^{my} Treatment.

The Treatment of Pneumonia prolixia if be adopted at an early period of the disease is simple; but if the disease be allowed to run into the second and third stages it is often very difficult.

I consider it however unnecessary to enter into a lengthy treatment; what is the treatment of the different stages. I think it sufficient to state that the Antiphlogistic Treatment should be adopted. Thus Bloodletting, both local and general, Emetics, Cathartics, Opiums, Blisters, Stimulating Expectorants &c.

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I have thus gone through
with what I intended to say on
menia. I might have written much more
on a subject so unexhausted, and
one which should claim the special
attention of every Physician: but as
I have no experience, and will therefore
have to ask the Faculty to excuse the
laconic manner in which I have
dispensed with this subject, and es-
pecially the Treatment. This is respect-
fully submitted.

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