

Yale University

## EliScholar – A Digital Platform for Scholarly Publishing at Yale

---

Yale Medicine Thesis Digital Library

School of Medicine

---

1-1-1850

### Dissertation on pneumonia

Charles Clifford Holcombe  
*Yale University.*

Follow this and additional works at: <https://elischolar.library.yale.edu/ymtdl>



Part of the [Medicine and Health Sciences Commons](#)

---


#### Recommended Citation

Holcombe, Charles Clifford, "Dissertation on pneumonia" (1850). *Yale Medicine Thesis Digital Library*. 3721.

<https://elischolar.library.yale.edu/ymtdl/3721>

This Open Access Thesis is brought to you for free and open access by the School of Medicine at EliScholar – A Digital Platform for Scholarly Publishing at Yale. It has been accepted for inclusion in Yale Medicine Thesis Digital Library by an authorized administrator of EliScholar – A Digital Platform for Scholarly Publishing at Yale. For more information, please contact [elischolar@yale.edu](mailto:elischolar@yale.edu).

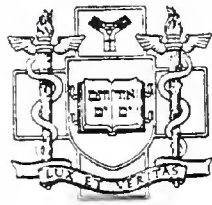




Digitized by the Internet Archive  
in 2017 with funding from  
Arcadia Fund

Harvey Cushing / John Hay Whitney  
Medical Library

## HISTORICAL LIBRARY



Yale University



---

*Dissertations*  
read by the  
Candidates for the Degree of  
Doctor in Medicine  
at the  
Annual Examination  
in the  
Medical Institution of Yale College,  
January 16-17,  
1850.

---



~~IX.~~

---

Pneumonia.

---

By

Charles Clifford Holcomb,  
of West Granville, Massachusetts  
Candidate for the Degree of Doctor in Medicine.

---





## Pneumonia

In the consideration of this disease, a knowledge of the morbid anatomy of the parts implicated will be necessary, in order that we may fully understand the physical signs, by means of which we can ascertain, almost without the aid of any other symptoms, the extent, situation and progress of this affection. The most reliable symptoms of the nature of this disease, the events to which it tends & the remedial treatment required, are pointed out to us by the changes wrought in the pulmonary substance which changes are made known to us by means of auscultation and percussion - Firstly, then a description of the morbid anatomy of the parts implicated in this disease seems necessary - Pneumonia or

inflammation of the parenchymatous substance of the lungs, is divided for convenience of description into three stages. In the first stage, usually called the stage of engorgement, the lung or part of it affected, is partly filled with blood & serum; its colour becomes changed to that of a bluish or venous tint externally; internally of a deeper colour. when pressed between the finger there is more resistance than natural together with slight crepitation. the cohesion of the lung is also diminished, from which it is said to resemble the spleen, hence, the name splenization has been applied to this stage of the disease. The inflammation not being resolved in this stage, the part affected usually becomes solid in the course of six

or seven hours. From this point is dated the commencement of the second stage of the disease, called usually, hepatization of the lung, from the striking resemblance which the deep red colour and granular appearance of the part now bear to the liver. This granular appearance shows itself at the commencement of the second stage and continues through the third.

These granules vary in size as the air-cells in which they are moulded vary. Some are  $\frac{1}{80}$ . some  $\frac{1}{8}$  + some  $\frac{1}{4}$  of a line in diameter, some round, some oblong &c according to the shape & size of air-cells. The lung at this stage will not yield readily on pressure, and there is no crepitation, the air being excluded from the air-cells by these granules - Throw a piece

of lung in this stage into water and it sinks readily, being about ten times heavier than healthy lung. The inflammation is now at its highest point, and the next stage, that of gray hepatization is merely a softening of the matter effused in the second stage - The matter called pus in the third stage, has been shown, by careful examination, to be precisely the same as the granular matter of the second stage, excepting that the blood effused in the second stage has now been partially deprived of its colouring matter: and the third stage I suppose to be absolutely necessary for a cure after the lung has passed into the second stage - In the next stage of the disease the lung, which was before dense solid & impervious, undergoes an

alteration of colour & consistency -  
This change is a gradual one, and  
is by some called the transition  
stage. The lung, which before was  
of a uniform red colour assumes  
a mottled appearance. Portions of  
the lung become of a gray or mar-  
bled colour, while others still re-  
tain the characteristic red colour  
of the second stage. When the colour  
has become changed to gray or drab  
it is said to have passed into the  
third stage. From this point the  
changes are towards a restoration  
of the part. At this period of the disease  
the substance in the cells begins  
to soften and a small quantity  
of air begins to enter into them.  
If you pierce the substance of the  
lung, it will be filled up with a  
milky fluid, and as before stated,  
this fluid presents the same micro-

-scopical appearance as the substance contained in the cells in the second stage, excepting that the blood has been deprived of its colouring matter & serum has been effused; and as I believe, this third stage is absolutely necessary for a cure after the lung has passed into the second stage, and this softening is the first step in the curative process. Serum is effused sufficient to float these different substances and they are expectorated. This effusion is disposed of in two ways, viz: - by expectoration & absorption.

Physical Signs - In the first stage consolidation is not complete and air enters the air cells - By applying the ear or stethoscope to the chest we get an unnatural respiratory murmur - It is a crepitant rale so called - This rale is probably

produced by the bursting of bubbles caused by the passage of air through cells choked up by effused serum. This rale may be imitated by rubbing a lock of one's own hair between thumb & finger. This rale is best heard at the end of inspiration & more frequently in the lower part of the lungs, as this part is said oftener to be the seat of Pneumonia. If the Pneumonia is deeply seated, we must require the patient to take a full inspiration in order to hear the rale.

Second Stage. At this stage there is complete consolidation of the diseased part & percussion will give perfect dullness over this part. Now there is no respiratory murmur or crepitant rale, because air is excluded from air-cells. Auscultation will now give you bronchial



or tubular respiration. This is the same sound which we hear when air is blown through any other tube - Why do we have this bronchial respiration in second stage? Simply because the lung is a better conductor of sound now than in the healthy state. The efficient cause of sound or rather of bronchial respiration is really much less in disease than in health of lung, because less air passes through the bronchi. The difference in the two cases is owing to the difference of the conducting media through which sound has to pass. Bronchial respiration is heard first in expiration, because the surface of the lung is compressed by the muscles of respiration and made a better conductor. When patient is convalescing, bronchial respiration ceases

first in inspiration for the same reason - Bronchophony. This is a voice sound heard first over the bronchial tubes. This sound can always be heard in the inter-scapular space & more distinctly on the right side. After consolidation, it can be heard anywhere in the neighborhood of large bronchi - Third Stage. This stage cannot be distinguished from second until consolidation begins to break down. When this takes place air begins again to enter the diseased part, the lung becomes a poorer conductor and bronchial respiration ceases. Percussion no longer elicits the dull sound and a variety of râles can be heard over all the diseased region - Seat of Pneumonia. Pneumonia may affect both lungs or one, i.e. may be double or

single - or it may affect the whole  
or only a part of a lung or in other  
words may be partial or general.  
It is thought to occur more frequent-  
ly in right lung than left - but  
in whichever lung it occurs, it  
more commonly commences in the  
lower part & extends itself upwards.  
Bronchitis is said to be always a  
concomitant of Pneumonia, Pleurisy  
to some extent, frequently.  
Circumscribed abscess & Gangrene  
sometimes, though rarely occur  
as the effects of Pneumonia - Manner  
of Attack - Pneumonia is generally  
 ushered in by a chill; although  
sometimes it comes on more slow-  
ly as the sequel to some other disease  
as bronchitis. Chomel says that  
when there is a well marked chill  
with signs of inflammation & he is  
unable to locate it, he assumes that

It is Pneumonia. The fever is inflam-  
matory with the characteristic pulse.  
When the fever is well marked the  
blood is said to be more changed  
in this disease than in any other  
except rheumatism. General Signs  
The most important symptoms  
aside from the physical signs,  
are, pain in one side of the chest,  
dyspnoea, cough, the peculiar  
expectoration & fever. The pain  
is generally in exact proportion  
to the pleurisy which accompa-  
nies it. It is most usually felt a little  
below one of the mammæ and  
is aggravated by pressure, it is  
most severe at the beginning &  
ceases before the Pneumonia  
does in most cases. dyspnoea or  
difficulty of breathing is generally  
in proportion to the extent and  
severity of the inflammation.

though not always, nevertheless extreme dyspnoea is always a very unfavorable symptom - The cough of Pneumonia gives us no particular information. It does not occur in paroxysms, is generally dry at first but finally accompanied by the peculiar expectoration of Pneumonia - When the sputa is viscid semi-transparent and partially aerated, of a yellow or brick dust colour, it is perfectly diagnostic of Pneumonia - This expectoration usually commences on 2<sup>d</sup> or 3<sup>d</sup> day of disease and continues throughout its course, gradually changing as the inflammation is subdued & finally coming to resemble more the expectoration of common catarrh - Although this expectoration is perfectly diagnostic when present, still it is many times absent, in which cases we

must be guided by the physical signs taken in connection with the other symptoms. Delirium sometimes occurs in the course of this disease & is an extremely unfavorable symptom. It indicates to us that a large part of the lungs is incapable of performing the requisite changes upon the blood, and that the brain is suffering from its poisonous effects. Causes of Pneumonia Cold and the common causes of other inflammations are also causes of this disease. Coming from warm to a colder climate, the natural changes of the seasons, long continued exertion of the lungs as in blowing a wind instrument or in speaking or reading aloud are probably among the more usual causes of this disease. Fewest cases of Pneumonia occur

in September & most in March, in  
this <sup>climate</sup> showing that it is not in the  
coldest, but the most variable months  
that this disease is most frequent.  
Pneumonia causes the death of about  
one in twenty-two of those dying in  
Massachusetts, and about one in  
eleven in New York City - Age has a  
strong modifying influence in this  
disease - it occurs more frequently  
in children & old persons and is  
more fatal than in those of middle  
age - Irritation caused by tubercles  
is a frequent cause of this disease  
In making out our Prognosis, there-  
fore all these modifying influ-  
ences, together with the extent  
& severity of the inflammation  
actually present, must be taken  
into consideration - Duration of  
Pneumonia varies from four days  
to six weeks - average duration of

fatal cases is placed at nine days,  
of those not fatal four weeks —

Treatment of Pneumonia - The  
remedies mainly to be relied upon  
in the treatment of this disease  
are, Blood-letting, Antimony and  
Mercury - of these the greatest re-  
liance is usually placed upon  
blood-letting - It seems to produce its  
good effects in two ways - firstly, upon  
the system, by taking away a part of  
the fuel upon which this conflagra-  
tion depends, and secondly, upon  
the function of the lung itself leav-  
ing it less labour to perform, conse-  
quently in a condition of compara-  
tive rest, which is favorable to it.

No particular rule can be given as to  
the amount of blood to be taken -  
The patient must be bled from a  
large orifice, being in an upright  
posture, until syncope is at hand,



the approach of which will in most cases be indicated by the sense of tightness at the chest being abated, by the dyspnoea & pain being relieved, and by the pulse becoming softer and more compressible. The bleeding should be repeated after four or five hours if pain & dyspnoea &c return. When there is much pain, topical bleeding is a valuable auxiliary to general bleeding. Blood-letting should be resorted to early. After the inflammatory symptoms have been abated by its use, we endeavour to keep the system in this state of prostration by the tartar emetic. The manner of administering this drug, is to commence with a small dose ~~at~~ combined with a few drops of Tinct Opii, to prevent its passing off by the bowels or causing vomiting. We may commence with  $\frac{3}{4}$  or  $\frac{1}{2}$  of a grain given once in an hour at first, and

gradually increase this dose as the system becomes tolerant of it, as the expression is - This dose has been increased until patients have taken two grains per hour for some days together with good effects. When by the use of the antimony the dyspnoea and other signs of inflammation have subsided, it may be laid aside; but must be again resumed if any of the symptoms return. By a judicious & reasonable use of blood-letting & antimony ~~as~~ it is probable that most cases of Pneumonia may be cured before the lung has become hepatised - When however the lung has passed into the stage of hepatisation, we are taught to place our reliance more upon mercury - and we must give it, in some of its forms so as to bring the system as speedily as

may be under its effects, which will be indicated by the gums being slightly tumid and sore. The manner recommended for producing this effect is by giving equal doses at equal intervals. Say one grain of Calomel ever hour or two grains every two hours combined with opium enough to prevent its from acting upon the bowels.

If however the pulse should become frequent & weak, if the extremities should become cold & the features shrunken and if the patient's strength appears to be giving way; we ought not to wait for the effect of mercury but resort immediately to cordials & stimulants. Among the other remedies, blistering, <sup>the chest</sup> is considerably relied upon. This measure will be particularly indicated, after the fever has in a great measure subsided

if there still exists some difficulty of expectoration together with some dyspnoea & oppression about the chest. But in the use of blisters we must be careful that we do not resort to them too soon, while there is yet considerable fever, as the irritation produced by them in the immediate vicinity of the diseased organ may aggravate all the symptoms -

Purgatives are not so much relied upon in this as in other inflammations, however a cathartic is generally given at the beginning of the disease and a daily movement of the bowels desired afterwards.

This I believe is the outline of the plan of treatment usually adopted in pure Pneumonia as it occurs in vigorous constitutions. Of course the age of the patient and the various complications to which it is liable

will require us to alter this plan of treatment accordingly, that is; the symptoms present in the case we are treating must be our guide for the treatment of that case

This view of the matter which I have now presented to you, is, I believe, in substance such as I have learned from able Teachers and standard Medical Works, and for which, I cannot claim any originality, excepting in its compilation and mechanical execution — With this acknowledgement, I respectfully submit it to your kind consideration —

C. Clifford Holcombe —





YALE MEDICAL LIBRARY



3 9002 08670 4872

1850

Accession no. 22999

Author Yale Univ.  
Theses for M.D.

Call no. T 113

Archives Y 11



