Pneumonia.

By

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I am perfectly aware that there will be little original matter in this thesis: I shall merely attempt to give a brief and as comprehensive account of pneumonitis as I can compile from the authors on the subject; and when I can make any original observations or suggestions I shall endeavor to do so. The books which I have read are the ordinary text books, viz: Waton's Principles and Practice of Physiomedical Practice of Medicine, Griswold's diseases of children.

Pneumonia

Pneumonia is applied to inflammation of the spongy tissue or parenchyma of the lung. All the tissues comprising the pulmonary substance in the part inflamed, may be considered as involved in the inflammatory process. There are several varieties of the disease.

As to these varieties, I will in this thesis follow chiefly the classification as given by Dr. Wood in his Practice of Medicine. These varieties are classified according as the inflammation exists in different portions of the pulmonary organ, or in the different constituents of any one portion, or according
to the relations of lues moxie to other diseases
to the relations of Pneumonia to other diseases with which it may be associated, and also according to the character of the febrile disturbance and general state of the system.

The inflammation may exist in a continuous portion of the lung, occupying a part of a lobe, or a whole lobe, or a whole lung. This is the Common or Simple form of Pneumonia and is called Lobal Pneumonia.

Frequently only small distinct portions of the lung are involved in the inflammatory process, sometimes only distinct lobules, or parts of lobules with intervening sound lung. This is termed Lobular Pneumonia.

When both lungs are affected, the disease is distinguished by the name of Double Pneumonia. Sometimes, though rarely, the inflammation affects chiefly, or only, the air cells, when it is termed Vesicular Pneumonia.

Occasionally the inflammation is seated in the cellular tissue between the air vesicles, lobules, and then it is often called Intervesicular or Interlobular Pneumonia.

Again when considerable portions of the Pleura
are affected also, the disease has been named
Pneumonia.
When the disease exists in connection with a
typhoid or low state of the system, it is called
Typhoid Pneumonia, and when with any
Silent derangement, Bilious Pneumonia.
And lastly the disease may be short or prostrated, hence named Chronic Acute or Chronic.
Although Pneumonia is divided into the several varieties above enumerated, yet I do not intend to treat at length of the disease under all these different heads, in this present thesis. I shall confine myself chiefly to the disease as it is most commonly met with, viz. that of Simple or Lobar Pneumonia, merely noticing very briefly the other varieties.

Anatomical Characters.

I. Common or Lobar Pneumonia.

There are three constant and well marked stages in Acute Pneumonia, which correspond to different degrees and periods of the inflammatory process: 1st. That of Congestion. 2nd. That of fully developed inflammation. 3rd. That of Depurative. In the first stage, or that of congestion or engorgement,
The substance of the lung is of a dark red colour externally, and crepitates less under pressure than thehound's lung does: it is heavier than natural, resilient, and retains the impression of the finger, notwithstanding its increased density; it still floats in water; when cut it exudes a reddish turbid and somewhat frothy serum; we feel that more liquid than air exists in the cells. The lung is more easily torn than in health, more in this respect like the spleen, and accordingly, splenization of the lung has been sometimes given to this stage of the inflammation. If the disease be arrested in this stage, the lung rapidly assumes its healthy appearance; if not arrested, it passed into the second stage; the lung having undergone further alterations: this stage is called that of red softening or red desquamation. In this stage the inflamed lung is characterized by a deep reddish brown or grayish-red colour; there is no crepitation under pressure; the density is so great that the lung will sink in water; the cohesion is less than in the first stage: the lung is so soft and friable that it may easily be torn or crushed: the cut surface very much resembles
resembles that of the liver. When the lung is pressed or an incision is made, there still flows a reddish fluid, which is less frothy, thicker and less in quantity than in the congestive stage. The cut surface exhibits minute granules in immense number, which are air cells filled with fibrinous exudation and rendered red by inflammation. The granular appearance is however, not always observed—the surface is often smooth and uniform. The lung does not collapse upon exposure to the atmosphere as in the healthy state. The marks of the ribs may be visible on the distended lung. It is sometimes so soft in this stage, that very moderate pressure may suffice to reduce it to pulp; hence Andral calls this stage of pneumonia red softening.

The third or suppurring stage of the disease consists of two conditions—one of which is called by Laennec gray hepatisation and by Andral gray softening, and the other is that of Abscess. In the former state, which is far common than the latter, the lung is dense and compact and impervious to air.
as in the last stage, but the color undergoes a marked change; the pulmonary tissue instead of being dark red, as in the last stage, is a drab, straw or stone color, or it may be of a grayish hue and matted off with red or black pulmonary matter. The lung, when cut, reveals an opaque yellowish purulent fluid, often tinged with blood. The pulmonary texture is much softer than in the second stage; it is in fact as rotten and poulard with gumiform matter that even pressure between the fingers will resolve it into a purulent fluid with only shreds of the solid tissue remaining. A very slight degree of force, as for example, in handling it frequently, produces a cavity in the parenchyma, which gradually fills with pus and might be mistaken for an abscess.

Abscess seldom occurs as a consequence of pneumonia. Laennec only found five or six cases in the dissection of several hundred cases dead from pneumonia, and Andral only once has been a real Abscess of the lung resulting from pneumonia.
When these Abscesses do occur, they may appear as mere excavations in the lung, hepatisation being surrounded by diseased parenchyma which may be gangrenous; in other cases, the walls of the cavity are lined by a smooth, grayish, falciform membrane. Then may be one cavity or more than one, which may separate or run together. The Abscess may be closed or may communicate with bronchia, pleura, pericardium, mediastinum, or very seldom with the peritoneum, or may open externally between the ribs.

Gangrene is a rare result of pneumonia in its common form, yet it occasionally occurs. Frequently it occupies a large portion of the lung; at other times it is more limited. The colour of the gangrenous is dark, dirty, olive or greenish; it is moist and wet and generally very soft and diffusible. The odor is very striking and affords the most distinctive characters of gangrene of the lung during life.

These three conditions which have been described may or may not be always distinct. Very often they are more or less intermingled.
Frequently the three conditions exist together. Under such circumstances, the gray hepatisation will be found in the centre, the congestion on the borders and the cell between the other two. We must not always expect to find the boundary defined accurately. As to the true pathology of these three states of the pulmonary tissue, it is stated that in the first the vessels are merely engorged with blood and the air cells partly filled with a serous or mucous effusion. In the second a plastic emphysema has taken place, and the cells, as well as the cellular tissue are filled with a more or less concrete and bloody lymph. In the third stage, the place of the plastic emphysema has been supplied by a serous or mucous fluid.

The pleura is sometimes but not always inflamed over the hepatised lung. In some instances the inflammation of the pleura is very great and then the disease is called pleuro-pneumonia. The bronchial are generally inflamed, containing more or less pus. The bronchial glands are sometimes enlarged and inflamed, softened. The right cavity of the heart often contains red
and seb, or yellowish and firm coagula.

Generally, the inflammation is confined to one lung and the right lung is more frequently affected than the left. Mr. Fissell says from statistics he collected, that double pneumonia occurred in about 18 per cent of the whole number. Pneumonia of the left side in about 30 per cent and that of the right side in about 52 per cent. The lower portion of the lung is the part most frequently attacked with inflammation; the middle and upper portion are far less frequently the initial seat of the disease.

II. Lobular Pneumonia.

This form of pneumonia is very rare in adults and most common in children under five years of age. The inflammation in this variety of the disease occupies spots surrounded by healthy tissue. These spots may be distinctly defined, occupying one or more wholes, or they may gradually run into the surrounding horn of the lungs so that they cannot be defined. Lastly, they may run together and form a continuous mass of inflammation as in the common form of the disease. The patches vary much in size.
Number, form and position. Those whose bounds are defined by size from a spheroid to an egg; they may be elongated, spherical or irregular; they may occupy both lungs or one, and are generally found on the finger-like part of the lung. They present the same three stages as in the common lobus pneumaticus.

Abscess frequently occurs in this variety, they are sometimes kings, sometimes laws to get and have a tendency to approximate the surface. They may communicate with bronchus or neighboring canals, or have no outlet. Sometimes they occur in both lungs, but most frequently are found only in one. Dr. Wood says, that this pneumonia in children is much more apt than that of adults, to result from a propagation of inflammation from the bronchial tubes to the vascular structure, and it is probable that the lobular pneumonia begins in this way.

Resecicular Pneumoniat

In this variety of the disease, the inflammation appears to be confined to the air cells and small portions of the bronchial tubes without affecting the intervening cellular tissue. When we cut the lung it is seen to exhibit a vast number of gray or yellowish granules.
of the size of a bullet and resembling tubercles but distinguished from them by their want of hardness and by sending a drop of fluid when cut.

**Syphylitic Pneumonitis.**

In this variety of the disease, we have associated a very low state of the system; the disease sometimes seems so nearly to pass the state of congestion, or if it does so, the blood remains liquid and yields none of the plastic secretion which gives solidity to ordinary hepatisation; if the inflammation continues it is very apt to turn into gangrene or imperfect suppuration. Under this variety, Dr. Hoog says, may be arranged the **hypostatic pneumonitis** of some authors, which results from the pulmonic congestion produced by lying long and constantly on the back, in debilitated states of the system.

**Chronic Pneumonitis.**

When the hepatisation consequent on acute inflammation of the lung, instead of undergoing resolution or passing into the supplicative stage, remains permanent, the pneumonitis is called Chronic. In these cases, the lung is compact and heavy, not fitting on pressure, not crepitant, tears with difficulty,
is often almost cartilaginous and when cut exudes only a little serous fluid. The colour is usually dull red, yellowish brown, or grayish. The chest is somewhat contracted on account of the volume of the lungs being diminished. The pleura is sometimes adherent. Under the head of Chronic Pneumonia, might be placed Abscess which sometimes follows Acute Pneumonia.

Symptoms, Course, Termination & of Pneumonia.

Common or Lobar Pneumonia.

The first indication of the disease is the patient a feeling of chilliness or what is termed a rigor. This is followed by difficult breathing, feverish symptoms, cough, violent pain in the side or back part of the chest. Sometimes and particularly in infants, there is no rigor. Sometimes the characteristic symptoms of the disease are preceded for some days by general lassitude, loss of appetite and slight febrile disturbance. Occasionally Cataract is the first symptom we observe and continues for some days before signs of pneumonia become apparent. When the pneumonia has become fully developed, it is characterized by quickened
breathing, fever, pain in the chest, cough and Biscid Reperation, which is not very profuse at first, and often mixed with blood. The breathing is always very rapid; the respiration may be increased to forty, fifty, and even forty-five in a minute; there is always a feeling of oppression aggravated by speaking. The dyspnoea is often great but generally will vary according to the extent of the inflammation. Inflammation of the upper lobe of the lung is said to be attended with more dyspnoea. Pain of the lower lobe.

The pain is frequently severe at the beginning, it is increased by a full breath. Coughing it may be situated in the side, back part of the chest, or in the mammary region. When both lungs are suffering from inflammation there may be pain in both sides and sometimes it is referred to the vicinity of the sternum. The sharp pain is probably owing to the pleura participating in the inflammation. In some instances there is an acute pain during any part of the course of the disease, but usually a dull, aching, oppressive sensation extends to the side or anterior part of the chest and sometimes to the epigastrium.
The pain is sometimes only rendered intense by a deep inspiration, or by percussing the chest.

The cough is very rarely absent. If blood is present, it has been known to be wanting for several days after the beginning of a very severe attack involving the greater part of the left lung. It is sometimes very violent and painful; at other times quite inapparent. At first the cough is usually dry, only a little mucus being expectorated; but soon a viscid, blood-stained matter is expectorated, which is or soon will be stained with blood so as to present a reddish or rusty colour. These characters of the expecta become more striking as the disease advances. The tenacity of the expecta is very characteristic; this tenacity is so great that the vessel may be turned up side down without the expecta ceasing to adhere to it. The reddish and rusty-colored expectoration is the most characteristic general sign of pneumonia. When typical signs fail, this one character is sometimes quite sufficient to indicate what the disease is.

The expecta is distinguished from that of bronchitis, which is often stained with blood, by the blood being intimately incorporated with the viscid, froth-like material, in the case of pneumonia.
The sputum contains a large proportion of coagulated fibrin. A more copious expectoration of transparent and frothy mucus is often observed when catarrhal symptoms are mingled with the pneumonia. The expectoration increases as the complaint advances, but seldom is very copious in true pneumonia. Sometimes the sputa may be purulent owing to a changed secretion of the bronchial tubes, or to the discharge of the pus of the sacculated. A fetid odor of the expectoration indicates gangrene. Occasionally a uniform liquid like emulsified, more or less tinged with blood, is observed instead of the characteristic viscid sputum.

Fever always accompanies these cases, and it alone in connection with increased frequency of respiration constitutes the only obvious affection. The fever is frequently very mild, at other times excessive. Pain in the head, especially about the brows and forehead, and flushed cheeks very often attend the fever. Delirium seldom occurs and is supposed to be a very unfavorable symptom. The pulse is usually full, strong and not very much accelerated, but sometimes it is very frequent. The skin is usually dry and hot, though occasionally moist; blood drawn...
from the arm, is generally buffed. The tongue is moist and covered with a white or yellowish white fur. Sometimes it may be dry and red. Thirst is almost universal. Diarrhoea and vomiting are only occasional symptoms. The urine is usually scanty and high coloured. The appetite is generally quite lost. Dr. Beali of London has confirmed the statement originally made by Dr. Redtenbacher that the chlorides of sodium disappear from the urine when hepatization begins and returns soon after resolution takes place: during its absence from the urine there is more than the normal quantity in the person of the body, and the sputum contains more than healthy persons. Hence it is inferred that its absence from the urine depends upon its determination to the inflamed lung.

The physical signs in the diagnosis of pneumonic are of the utmost importance. Cough and pain may be both absent. The sputum may often fail to help our diagnosis. The patient may swallow the expectorated matter as is generally the case with infants. Sometimes no expectoration whatsoever takes place; at other times the sputum may
he counting its characteristic properties. In first cases, before auscultation and percussion was employed, cases frequently run their whole course quite unsuspected. Now, by the combination of percussion and auscultation, we seldom fail to discover the nature of the disease. Then, however, the inflammation is situated in an anterior portion of the lung and is on all sides surrounded by healthy tissue, we sometimes do not succeed in making a correct diagnosis.

Percussion affords little information as to the state of the lung in the first stage. Generally, the resonance of health is slightly impaired. If the finger be used as apleyrometer, there is usually imparted to it a sense of diminished elasticity.

Auscultation, on the other hand, gives us much more decided information in this stage of the disease. If we apply the ear to the chest, we hear a very fine crepitation instead of the normal vesicular breath sound. The crepitation may at first affect only the beginning of inspiration, but it very soon extends throughout the inspiratory movement. It is rare in expiration.

This crepitation is the characteristic sound of pneumonia. There is some danger of confusing the subcutaneous
Hale of Capillary Bronchitis. With this test primary Crepitation (call the former of which may exist in inspiration. Whereas the Crepitant +ale is heard, it may be certain that there exists Pulmonary Inflammation. Sometimes, though rarely, it cannot be discovered in ordinary true pneumonia. Waldeh accounts for this by the rapidity with which the vessels are filled with the exudation. Weakening of the respiratory mucous about the inflamed part, before Crepitation has begun, often indicates the beginning of congestion. Pulvis or Inspiration may be heard in other parts of the chest. The crackling sounds or Bronchitic Crepitation proceed from the minutest division of the air tube, and from the ultimate vessels of the lungs. Perseveration in the second stage yields us very important information. In this stage, there is decided dulness, and often perfect flatness in the parts most consolidated. The boundary of the consolidated lung may be well marked by the dividing line between clearness and dulness.

The Occultatory phase changes as the disease advances into the second stage. The respiratory mucous having been previously abolished, the Crepitation ceases. Either no sound is heard or only that of Bronchial
Respiration, which is one of the characteristic signs that the second stage has commenced. Sometimes, though rarely, there is presented to the ear no other impression than that of the rise and fall of the walls of the chest; this only occurs when the inflammation occupies the lowest portion of the lung where there are no large tubes or where the whole lung is affected and there is no respiration in the affected side. Generally we hear distinctly the bronchial respiration. This sound is owing to the consolidation of the inflamed substance, by which the tubal sounds are conveyed to the ear, but which are arrested in the spongy tissue in the ordinary condition of pneumonia. The crepitant rale and the bronchial respiration may be mingled together during the passage of the consolidation into liquefication, by which a sound is produced which has been compared to that made by tearing of taffeta. Even only crepitation may be heard at one part and bronchial sounds at another. Stronger local resonance exists in this stage than in the former. Bronchophony is characteristic of the second stage. Greater vibration of the walls of the chest when the patient coughs or speaks, joints in this stage and is rendered sensible by placing the hands on the chest.
over the part affected. Sometimes the bronchial respiration and bronchophony do not exist, probably on account of the obstruction of the bronchial tubes entering the haphazard portion of the lung.

If the disease advance no further than the first stage, the minute Crepitation gradually ceases and the healthy respiratory murmurs restored. If the disease be arrested in the second stage, the bronchophony and bronchial respiration vanish by degrees and then the Crepitation, then the healthy respiratory murmurs and resonance on percussion succeed in turn. The Crepitation is not quite the same as the minute Crepitation of the first stage, but is of a more insubscriptant tone, owing to the more fluid nature of the secretion.

The third stage, says Dr. Wood, cannot be distinguished by physical signs. As long as the pus remains diffused in the parenchyma, constituting the gray hepatisation of Laennec, the flatness on percussion is presented and the same respiratory sounds. Should an abscess have formed and opened into the bronchia, a gurgling noise, if the cavity contain a liquid, and greater idling with cough and respiration, if it be empty, will be the diagnostic sign.

Very seldom a fatal result happens in the first
Stage of pneumonia, and only when a large portion of the lung is involved at once. Most frequently, however, the first stage advances to that of liquefaction, which comes on generally from one to four days from the beginning of the attack, seldom as late as a week. The change is not marked by any obvious general symptoms. There is probably an increase of dyspnoea, fever, ability to eat, but the pain is often diminished.

There is no certain sign by which the accession of the third stage can be distinctly marked. But usually the difficulty and frequency of respiration is increased; the pain often quite vanishes, the expectoration diminishes in quantity or becomes purulent, or has the appearance of dark, turbid, greenish or ecru, all at once, on account of the weakness of the patient under inflammation unable to cough up the matter formed.

The pulse becomes rapid: the countenance becomes pale: the skin is bathed in cold sweat and death occurs preceded by rattling of trachea, which has accumulated in the chest. Most frequently the disease takes a favorable turn in the second stage. It has been much questioned whether recovery ever takes place after the third stage has been fully
Established; but it is now generally admitted that recovery does sometimes occur before the tissue become completely disintegrated. When inflammation terminates in abscess recovery frequently takes place, Laennec says that he met with more than twenty cases of abscess in one year, all of which recovered except two. The return from pneumonia to health is frequently marked by the occurrence of certain discharges, or of other phenomena incident to Critical. Obious perspiration, diarrhea, dysentery, and other hemorrhages, cutaneous eruptions, especially herpes about the lips, boils and large abscesses are mentioned among the critical symptoms.

The return of Chloroide of Sodaum to the urine, after its absence during the progress of the inflammation is considered a favorable sign.

In Double Pneumonia the dyspnea is usually much greater than in life, and the other symptoms much aggravated. Pneumonia is modified in elderly or debilitated persons, especially when they are weak from any cause; frequently there is no acute pain and little or no expectoration, and the matter that maybe expectorated has not the usual characteristics of the disease.
II. Tubular Pneumonia.

This variety of Pneumonia is seldom seen in the adult, occurring usually in children under the age of 10. The diagnosis is more obscure than in Common Pneumonia. Children swallow the matter expectorated, so we are not aided by an examination of the pulmonary secretion. It is difficult to guess or listen with the stethoscope in cases of young children; besides, we have difficulty in telling whether they have pain and what is the seat of it. The disease itself is often the consequence of other diseases and hence escape special notice. The disease may begin with the usual well-marked symptoms of Common Pneumonia, but more frequently the scattered points of inflammation are insufficient to produce decided constitutional effects; but when the disease is a little advanced, the general symptoms set in severely; there is generally no expectoration; the pulse varies from 120 to 180 in the minute; the respirations have been known to exceed one hundred in a minute. If the disease take a favourable turn, the symptoms begin to improve in about a week, more or less; if it advances, the power of the system gradually fails, and death takes place, preceded by anorexia or thirst, usually.
The duration of this form of pneumonia is generally longer than of the common or labor forms. The physical signs are very important. The crepitant rale is seldom heard, being covered by mucous sounds. The subcrepitant rale is usually heard through both the complaint and is the most characteristic sign. In advanced stages, bronchiatic respiration may be detected on the upper part of the lung. Percussion is of much importance in the early part of the disease, but as it advances, it becomes a valuable sign. Dullness and frequently perfect flatness exists on both sides posteriorly, usually equal. The examination should be directed particularly to the posterior part of the chest, both as to percussion and auscultation.

Typhoid Pneumonia is applied to that form of the disease which occurs in enfeebled constitution, or in those whose condition of whose blood has been impaired by any influences whatever. It may be developed in the course of typhoid fever or other inflammatory disease. Most of the local symptoms do not differ from those of ordinary pneumonia, but often there are severe neuralgic pains, especially which may not be confined to the seat of inflammation; they may be felt on the opposite side and sometimes
extends down the back and sides and even to the extremities. The expectorated matter, in early stages, is bloody and often nearly pure blood; it is less viscous and more copious in all stages than in common pneumonia; it is sometimes brown, blackish or fetid. The pulse is generally weak and readily compressible; the skin is hot and dry; there is throughout an obtuse condition of intellect. The physical signs are dulness on percussion and the absence of the Respiratory murmur with little or none of the crepitant rale, the place of which is supplied by mucous sounds. This affection usually occurs in the course of malignant epidemics; but sporadic cases are occasionally observed under conditions which produce a febrile state of the system, or from action of deleterious and poisonous gases. Sulphurized hydrogen being the most deleterious. Recovery frequently occurs, but it takes place comparatively slowly.

Chronic Pneumonia is comparatively rare; it follows acute pneumonia and may last for months or years; the lung still remaining consolidated in the situation of the original suppuration. The pain is transitory, sometimes altogether absent, always more or less dyspnoea and increased by motion.
The cough is usually not severe, with or without expectoration, which is mucous or green, but not flecked or rusty. The appetite is impaired. The patient is usually able to keep about. There may be hope for the patient as long as tubercles are not generated. The physical signs are dulness or entire flatness on percussion, the absence of respiratory sounds, and even absence of all respiratory sounds, when the consolidation is extreme, and even local resonance may be wanting in the distant parts of the lung. Bronchial respiration and bronchitis may be heard at or near the borders. The return of respiration is generally first in the upper part of the chest in favorable cases, and gradually extends down wards.

Causes of Pneumonia.

Sudden exposure to cold, when the body is warm and quiescent. Peculiarities of the weather are the most common causes. Direct violence, excessive use of the voice, poisoning or acrid inhalations, excesses in drinking, suppuration of the discharges are among the occasions. Pneumonia often follows accidental injuries and surgical operations. Affections of the heart.
often occasion it by the pulmonary congestion to which they give rise. Chronic diarrhea appears to predispose to it in young children. It prevails more extensively in cold countries and in cold seasons. One who has suffered seems more liable to subsequent attacks; it is more common in males than in females, probably because the former are more exposed to cold and wet and other exciting causes. Various diseases are apt to be accompanied with pneumonia and are thought to favor its production, for example, Bronchitis, Measles, Pertussis.

Diagnosis of Pneumonia. Bronchitis, Pleurisy, certain states of Arthritis and pulmonary Edema are the diseases most liable to be confounded with pneumonia. But attention to the signs and symptoms as have been already described will generally render it easy in readily arriving at the proper diagnosis.

Prognosis. In cases of common or light pneumonia occupying a part of a single lung, with complications and in persons of good constitution, a favorable result is almost certain under proper treatment. One of course must look for more unfavorable issues according as his patient is
debilitated or advanced in years. If the whole of one lung or both lungs be involved, the disease is proportionately fatal. Secondary pneumonia is more fatal than primary, and the lobular than lobar variety.

Treatment of Pneumonia.

It seems somewhat difficult matter to decide what form of treatment is best to pursue in Cases of Pneumonia. The members of the medical profession, even at present appear to be divided considerably on this point. The treatment, employed at the present time, seems to resolve itself into three forms or systems. Each system has its advocates among the most able and accomplished physicians. These three forms of treatment are as follows:

II. The expectant or dietetic treatment.
III. The treatment directed to further the natural progress of the disease.

It is, perhaps, unnecessary to consider at length what these three systems of treatment consist in. The first form speaks for itself; sufficient to say that it consists, particularly in lowering the patient’s system, which is accomplished chiefly by blood lettings.
The second form, which is the expectant or dietetic system, consists chiefly in allowing the disease to go through its natural course. During the stage of fever the diet is light and cold water allowed for drink; sometimes remedies are given to meet occasional symptoms, when the dietetic is connected into an expectant system. Frequently opium is given in large doses if there be much pain. Denudation is also practiced early if there be much dyspnoea. And fomentations are given if the expectoration consists of tough mucus.

The third form of treatment consists in furthering the natural progress of the disease. This is the system specially advocated and pursued by Professor Bennett. He says in his work on the Principles of Medicine, that the treatment, as he pursues it, consists in never attempting to cut short the disease or to weaken the pulse and vital forces, but on the contrary to further the necessary changes which the eruption must undergo in order to be fully secreted from the economy. To this end, during the periods of febrile excitement he contented himself with giving fomentations in small doses, with a view of diminishing the acidity of the blood. As soon
as the pulse becomes soft, he orders good food, tea, and
outlets; and if there be weakness, from 4 to 8
ounces of wine daily, as the period of crisis ap-
proaches, he gives a diuretic to favor secretion of
urine. If the crisis occurs by sweat or stool he
takes care not to check it any way.
In order to form an opinion as to the most successful
system of treatment, it will be necessary to have
accounts to statistics. Dr. Bennett has collected a
number of statistics showing the results of these forms
of treatment; and from these statistics the results are
as follows:
The result of a rigorous antiphlogistic treatment as
formerly practiced is a mortality of 1 in 3 cases.
The result of a treatment by tartar emetic in large
doses, according to Lazzari, and more recently to
Dietl, is a mortality of 1 in 5 cases; but according
to Laennec, 1 in 10 cases; the result of moderate
bleeding, in the treatment of Grisolle is a mortality
of 1 in 6 in cases; the result of a dietetic treatment,
with occasional bleedings and dietetics in recent cases,
as with Stoda, is a mortality of 1 in 10 men; and
of pure, as under Dietl, a mortality of 1 in 13 cases.
All carried on in large public hospitals.
Further, the mortality from pneumonia in the Army and Navy, occurring generally among able-bodied healthy men, has been 1 in 13 cases. Lastly, the result of a treatment directed to further the natural progress of the disease, as practiced by Dr. Bennett in the Royal Infirmary, Edinburgh, is a mortality of 1 in 21\frac{2}{3} cases.

From these statistics it would plainly appear that the treatment pursued by Professor Bennett is by far the most successful. The duration of pneumonia treated after this method seems shorter also than when treated by the other methods. The average duration of single uncomplicated cases being 14\frac{1}{2} days, and the average duration of double uncomplicated cases 21 days. I have had, in my dispensary practice, 4 cases of well marked single pneumonia. These patients were all treated, as far as possible, according to Professor Bennett's direction and all 4 recovered perfectly in about 15 days.

The treatment, which on the whole, seems most advantageous and which would probably recommend by the majority of experienced practitioners, is not strictly any one of the above methods. As Dr. Wallen says, 'we must not be guided by the mere name...'
of the disease: in this particular instance we must not be guided by even the thing pneumatica itself as disclosed by the evidence of Auscultation. The constitutional symptoms must direct the treatment, while the local symptoms identify the disease. The patient's constitutional symptoms must certainly be attended specially to. The treatment which might be advisable to pursue in one case, might be quite inadmissible in another case. Most Authors now agree that bleeding should seldom be resorted to.

Tincture Emetic in nauseating doses, in the first stage of pneumonia, is recommended by nearly all Authors as very valuable. In the second stage Dr. Wood and Strong recommend Calomel, and in the declining stage of the disease. In cases, expectorant medicines are often useful. The syrups of aquills and senita combined with a little tincture emetic and one of the Salts of Morphia, and given in such doses as the stomach will bear without being nauseated, is very useful.

If the pulse remain frequent, as is sometimes the case, the mixture of digitalis may be added to the other ingredients.

Pneumonia, like many other diseases, probably is apt to be too much meddled with by the Doctor.
And in most cases, if the general condition be looked after, the symptoms attended to, the disease will run through its course and the patient make a more rapid recovery, than if active measures in the way of treatment had been employed. In fact, this is almost the method pursued by Dr. Bennett. In many cases, however, it will be proper to deviate somewhat from this method. Chronic Pneumonia must be treated, according to circumstances. Dr. Wood says the most efficient treatment, if consolidation of the lungs continue, without evidence of suppuration or abscess, is probably a steady course of the mercurial pill in small doses, so as to very faintly affect the gums. Blisters applied to the chest, and when suppuration has occurred, narcotised with expectorants to allay cough and inhalation of the vapour of tar are the chief remedies. No mercurial should be given when suppuration has taken place. The diet must be regulated by circumstances. The treatment required in other forms of pneumonia is not specially different from that pursued in the common form.

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