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Pneumoniac some of their symptoms and their prognoses.

Pneumonia is an acute disease consisting of inflammation of the pulmonary tissue, in which from the presence of fibrin and leucocytes within the alveoli and smaller bronchi, the whole or greater part of one or more lobes is rendered solid. My remarks have special reference to the disease, as met with in the ordinary routine of private country practice, and not with special cases. I should first say that in many cases, the premonitory symptoms are like those of an ordinary fever, in which the patient feels cold and out of sorts, and with no definable complaint to make at the outset. In this condition many try to fight against their indisposition, to the great detriment of their subsequent well-being; and, in many cases retarding their convalescence, even if a successful issue is to be expected. There may or may not be thirst, but there is usually anorexia, in the early stage of the disease. I should like to emphasize this point: that the early stage of pneumonia is a very variable one, and may last from one to three days, and this irrespective of the type that the illness may subsequently assume. The popular belief is, that the sthenic form of the disease runs a rapid course and is at its height in six or eight days. But this is by no means always the case. For we find young strong people complain, yet we

are not able to make a diagnosis, though the disease is there, until the third or fourth day, and in such a case we do not expect the crisis till the tenth or twelfth day. Hurried breathing and cough are the two symptoms that direct our attention to the chest. Hurried breathing usually comes before the cough. It may be an early symptom accompanying the others I have already mentioned, or coming soon after, yet, even in this early stage, a physical examination of the chest, will not reveal the existence of pneumonia, at least in some cases, though the pulmonary symptoms already mentioned, might suggest to some the probable disease to expect, from these symptoms alone. The supposition is however made all the stronger, if with fever and general restlessness, there is cough, and I usually find that the latter symptom is almost always attended by pain in one or other side, depending on the lung that subsequently becomes involved. Of course at this stage, which may be four or five days from the commencement of the first signs of illness, the dulness in the chest can be made out by physical examination. Now what I wish to point out is: that a physician may attend a patient with pneumonia for three days, or even more, and yet not be able to diagnose the case as such by physical signs alone. I am aware that some forms of pneumonia, such as that attended by poisoning of the blood, and such as are concomitants of other diseases,

such as typhoid fever, lead a slow and insidious course, and are most subtle in their invasion and may exist for days without shewing any symptoms to suggest their existence. The progress of this form is slow at its commencement, slow during its course, and most tedious during convalescence, if such a happy issue should be attained. But such forms of pneumonia, would be classed as asthenic rather than the sthenic, which variety we have now more particularly to do with. Rapid breathing and pain in the side may be present in other lung troubles besides pneumonia, but the temperature is usually higher in this disease than in most other lung affections. The supposition that pneumonia is present is made all the stronger, if the temperature is above 103°. This is the first symptom we have of an objective kind of real significance, but we are utterly unable to form a diagnosis from it alone. In proportion to the height of the fever, will be the gravity of the case, and the shortness of the period, till physical signs supervene in the chest. Age, I consider has also something to do with the character of the onset. In the young and strong the period of indefiniteness is shorter, I mean, from the first onset of fever, till physical signs develop in the chest, when we can definitely make a diagnosis, than in the feeble and the old. Epistaxis is a symptom we occasionally find in this disease, in the young and plethoric, rather than the old. This symptom we meet

with in other diseases besides pneumonia, and measles is the one we most frequently see this symptom associated with, when accompanying one of a febrile character, for in both there is a good deal of flushing. It occurs at an early period in pneumonia and in measles, according to my experience, but not however till the physical signs are well developed in the chest in the former, and the rash is plainly visible in the latter. It has probably the same origin in both, and it is the same ~~same~~ class of patients that suffer from it, and those who are disposed to suffer from it in good health. With reference to epistaxis Dr. Hall in the last Lettsonian Lectures says "it may be an early symptom, or occur as one of the critical phenomena", further he says "Whether the pneumonia is of septic origin, or whether the micro-organism first sets up the inflammatory mischief in the tonsil, and then proceeds to affect the lung, I must leave to be settled by those skilled in bacteriology". In my opinion this symptom may be explained on mechanical grounds, and may be due to a simple engorgement of the capillaries of the nasal passages. There is always a good deal of flushing of the face to be seen in sthenic pneumonia, and, I think, it may be safely inferred that there is active congestion of the nasal mucous membrane also. I think, we need not invoke the aid of bacteriology for an explanation of this symptom as we find it not so infrequently in diseases so wide apart as measles, typhoid fever, meningitis, and the

disease under consideration. That pneumonia may be caused by a septic source in buccal or nasal cavity is also certain; and it is not long ago since a case was recorded (British Med. Journal Nov 6th 97) in which the disease was caused by a gangrenous condition of the hard palate in a man 71 years of age, and who only survived the onset of the disease three days. Chill is often the cause of this disease, therefore we meet with it most frequently in the winter months, and not infrequently in early winter and late Spring - in early winter when people have not yet assumed their fair amount of winter clothing, - and in late Spring when the winter garments have been too soon laid aside. During the present time when micro-organisms account for so much in the causation of disease, it is natural to ask, Will chill by itself cause pneumonia? I think it may be safely stated that it will, as it may cause a nasal catarrh, which may precede the pneumonia, and is the actual extension downwards of the inflammatory condition first seen in the nasal mucous membrane. We also find those countries which have the greatest variability of temperature, during the various seasons of the year, furnishing the greatest number of cases of this disease. Though chill is a powerful exciting cause, it is a more potent factor in the causation of this disease, if the individual is in a low state of health at the time of his exposure to chill. It can therefore be readily inferred that

outdoor labourers are the most frequent victims of this disease. A class of people we often see suffer from pneumonia are commercial travellers. The nature of their occupation exposes them to sudden changes of temperature, and we should say chill has a great deal to do with the causation of the disease in them. But we should not too readily exclude other causes. They go about a great deal, and are consequently brought in contact, particularly in the cities with foul smells and noxious effluvia which are frequent sources of disease. The fact that cases of pneumonia occur occasionally in groups within certain limited areas as regards locality, and within certain limited periods of each other as regards time, suggest the infective nature of the disease. That such attacks have occurred is well known. But it is not sufficiently demonstrated so far, if one or more localities in our climate is more liable than another to this particular disease, or, further, if the gregarious tendency it sometimes evinces in certain places, is at all likely to repeat itself.

Although the disease occurs in epidemic form occasionally in many instances the outbreaks are limited to single households or institutions, such as schools, or barracks, or prisons. Unsanitary surroundings no doubt help to cause it in these circumstances for there we often find bad ventilation and overcrowding. Epidemics of pneumonia often occur coincidentally with outbreaks of other diseases such as enteric fever, and it is well within our recollection what

an all powerful influence for evil it played during the year 1891, when the ravages of influenza were so fatal. We find influenza and pneumonia now so frequently associated that the name influenzal pneumonia is frequently colloquially given to the combination. In like manner we hear typhoid-pneumonia, but in this case the designation is more confusing, and may have a double meaning. With some it is regarded as pneumonia complicating typhoid fever, by others as simply the asthenic form of the disease.

There are one of three micro-organisms which are said to exist in all cases of pneumonia, and this would lead one to suppose that it is a specific disease, depending for its causation upon the introduction of one or more of these kinds of organisms into the blood. The three which find most favour at the present time, and which are said to be found in all cases of pneumonia are - called after their respective discoverers, and placed in the order of greatest frequency: - (1) Fraenkel's pneumococcus. (2) Friedlander's bacillus (3) Klein's bacillus pneumoniae. But we are placed in a difficulty in accepting one or other of these micro-organisms as a cause of pneumonia when we find that they exist in other diseases, particularly those of a suppurative tendency. In such cases there is usually a febrile condition, and, besides, there is a local inflammation co-existent with it, and the tendency of the local condition is to suppuration. Besides, it is said that inoculation

of these cocci do not reproduce the disease with the same certainty when inoculated into animals, as is found in other diseases. Hence the particular cause of this disease is still to be sought for in view of the fact, that the micro-organisms we find most frequently associated with it, we also find in various secretions of healthy subjects. Under these circumstances, we have to fall back on the old theory of causation namely - a subject, in a low state of health, or, perhaps, convalescent from some other disease, exposed to sudden chill, or noxious emanations - are sufficient to cause the disease. In a typical case of pneumonia the physical signs are well marked, and cannot be mistaken for any other condition. But there are cases, particularly of the lobular variety, which are not by any means so easily made out; in such cases the consolidations may be confined to one or more lobules deep seated in the lung. Then the physical signs may be very faint, such as slight dulness, distant tubular breathing, and a few rales found at the height of the disease. These consolidations may however be so numerous that the physical signs so characteristic of the lobar variety may be found also in the lobular. The pain which is a frequent symptom of the disease, and is almost always present is said to be due to one of two causes, either stretching of the capsule of the lung, or to a certain amount of co-existing pleurisy. Some authorities indeed aver that

pneumonia never takes place without a certain amount of pleurisy; but it is a fact that pneumonia may occur without leaving a trace of its previous existence behind, whereas the same cannot always be said with regard to pleurisy. When the disease is at its height, the lung tissue is hard, solid, & heavy, the excess in weight indicating the addition to it of fibrinous and corpuscular elements. These elements enter into the substance of the lung, and into the finer air vesicles, which become obliterated, hence it is that we find such deficient aeration of the blood, as indicated by lividity of the lips, in severe cases of pneumonia. This deficient aeration of blood is not such a frequent symptom as we should expect from the extent of lung surface deprived of its function, but we find it as a rule in pneumonia when it affects both lungs. Now considering the great excess in weight of the lung, and also its bulk; one would expect when resolution is taking place, that there would be a great amount of expectoration, but this is not always the case; and it is surprising though the consolidation may be very extensive, and well marked, so far as physical signs can guide us, that the expectoration may amount to only four or five ounces in the 24 hours. It is still more surprising that there may be actually none whatever, though the physical signs may be well marked. When we consider what frequently takes place in surgical practice, the only inference to draw from an

exudation disappearing from the lung, is that it has been absorbed by the lymphatics. But we find cases of pneumonia where the expectoration relatively speaking is abundant, amounting to over eight ounces in the 24 hours. In my opinion when we get such a condition of things, it will have a certain bearing, of course associated with other symptoms, on the prognosis of the case, and that more particularly in the old, when the sputum does not appear at all rusty, but is purulent. The fever in these cases is of a more remittent type, and the disease ends in alysis. This is the variety of pneumonia which may develop into pulmonary tuberculosis, then the course of the disease is protracted, and usually terminates life in six or eight weeks. Another termination of this variety of pneumonia is gangrene of the lung, involving that portion of the lung which first became consolidated. It is frequently seen in the old, and is not an infrequent accompaniment of those forms of pneumonia which have a septic origin. In these cases the expectoration is very profuse and foul smelling, the fever of a remittent type, with profuse perspiration, and all the symptoms of acute phthisis, which subsides to life in a few weeks. Sometimes the pneumonia of influenza though acute at the commencement, leads to a subacute form of the disease, with great prostration and exhaustion, and all the physical signs and general symptoms of acute tuberculous phthisis. Many cases of this form of pneumonia

linger for many weeks, but ultimately recover, after an illness extending over some months duration. In cases of this kind the prognosis I should consider, would be rendered fairly accurately at the beginning, by a bacteriological examination of the sputum. That pneumonia in all its varieties, is a serious disease must be admitted, even a case which is apparently mild at the outset should not be too lightly considered, in view of the many forms it may assume or develop into. But pneumonia, as a disease, may be considered as tolerably free of sequelae. When we consider the type of individual or the constitution which is susceptible to pneumonia, it is incumbent on the physician to be very careful as to treatment, and still more so, in giving a prognosis of the case. Influenza as already mentioned is a frequent concomitant of pneumonia - the former developing into the latter - giving rise to complications which render it far removed from the sthenic or ordinary variety, both in its symptoms and physical signs. We know that influenza is a universal disease in our climate, and that one attack renders the individual susceptible to another, and that therefore, those who suffer once run great risks of falling victims to it. It is also when the weather is most changeable, that we find influenza most common, and the two diseases seem to work hand in hand. But I should say that there are epidemics of influenza which are not so liable to be followed by pneumonia as others. Pneumonia is

said to occur frequently among the precursory diseases of the phthisical, and conversely it may be stated that the tuberculous predisposition favours the susceptibility to pneumonia, just in the same manner as pleurisy may be regarded as one of the precursory diseases of phthisis.

In treating cases of pneumonia, every physician who has seen much of the disease, is, I am sure, prepared to admit that he occasionally meets with surprises, when the patient is carried off in a comparatively short space of time, without meanwhile any serious symptoms developing, or having had time to develop, and while we were nursing our patient in the sure hope of seeing him safely past the crisis. In these cases we have to look for an explanation of the sudden termination of life in some other organ than the lung, which is the one primarily involved. In this disease there is an undue amount of fibrin in the blood, as in other inflammatory conditions, and coagula tend to form where there is at all any tendency to blood stasis. And when we take into account the condition of the lung, when the greater part of one or both has become consolidated. It shows what an amount of extra labour is put upon the heart, which is itself also rendered feeble through deficient aeration, and is trying to force the blood through that portion of one or both lungs which has escaped the consolidation. This theory, I think, explains the two results

that we are so liable to have sprung upon us in this disease so unexpectedly, and which are often the actual causes of death in pneumonia. In the one case there is sudden cessation of the heart's action coincident with some sudden movement of the patient, such as quickly sitting up in bed for instance. In the other coagula form in the right side of the heart, or in the pulmonary arteries, and give rise to urgent dyspnoea, which lasts for a brief period, or may end suddenly in death. This is a result of pneumonia which we not infrequently see, and when it does happen is comparatively early, usually before the crisis. When we find the heart acting rapidly, it is usually associated with great feebleness and not infrequently with irregularity. We may regard this as an attempt of the organ to overcome the obstructions to the blood flow, which however it does sometimes but imperfectly, as the systemic veins in these cases are apt to be overloaded, and the surface of the body, or at least the lips and nose may assume a dusky hue.

Extreme rapidity of pulse, with great feebleness and irregularity are symptoms to be considered with grave apprehension in this disease if they develop before the crisis is reached.

The amount of respiratory distress is not such a good indication of the progress of the case as the pulse. The respirations may be three times the normal number in frequency, and the case prove a typically well marked one

throughout its whole course, and make a rapid and perfect recovery. If however the pulse approaches to double, and still more, is more than double its normal frequency, it is a symptom which by itself should make us apprehensive. These remarks do not apply to children in whom the normal pulse-respiration ratio is not so perfect as in the adult, but in whom proportionately they are very greatly exaggerated. To notice the character of the sputum, is a matter of some importance in pneumonia, in considering the gravity of the case. The typical sputum is the rusty kind which is extremely viscid, and not abundant. This is the character of the sputum we meet with in ordinary cases of pneumonia which end favourably. It is said that the expectoration of pure blood is a bad sign in the early stage, and indeed I should regard this as a bad sign in any stage of the disease. This variety is not often seen, though a modified form of it is of more frequent occurrence, when we see streaks of blood in the ordinary variety when it tends to become mucopurulent, as it usually does in the later stages of the disease. This is a sign of bad omen. Sometimes instead of assuming the mucopurulent appearance in the late stage of the disease, it acquires a more watery consistence, and is reddish brown or purplish in colour. This variety has been likened to prune-juice, and may be accepted as an unfavourable symptom; so also is the sputum of deep

green tint, which has been likened to green sage; and that variety which is of the dirty-orange colour is particularly of very grave import.

The disease is more favourable in the young than the old. It is also more favourable in the lean than the obese, and it usually has a fatal result in those who are addicted to the free use of spirits. This is easily understood when we consider that the heart participates in the general flabbiness and want of tone of the body, which such a pernicious habit induces; and it is a well known fact that these patients do not survive the onset of the disease many days. It has a similar result, if it comes on in the course of delirium tremens. In pulmonary emphysema when so much lung tissue is infilled or rendered useless for the proper aeration of the blood, it is easy to understand that pneumonia is fatal in these cases. Bright's disease coming on in the course of pneumonia is of very unfavourable import, as it is also if it supervenes upon that disease. If it occurs in persons with heart disease it is also commonly fatal.

There are said to be various kinds of pneumonia—the name given to each kind being on account, not so much of any distinctive feature it may present in itself, but rather from its association with some other disease. Where we do not have any such association, the kind of pneumonia we then meet with most frequently is the lobar

variety, and is therefore called idiopathic, or it may be called primary. This is the kind in which our prognosis is most favourable if it occurs in a young, strong, and previously healthy subject. The catarrhal variety may be primary, or it may be secondary to other diseases. In its primary form we see it frequently in children, and this is the form it usually assumes in them. In the adult, on the other hand, it is frequently secondary to other diseases, and whatever disease accompanies it, such disease gives it its own peculiarities. Therefore we have diabetic pneumonia, cardiac pneumonia, septic pneumonia, pyaemic pneumonia and so on. Some authorities object to the name catarrhal pneumonia, and I think rightly, because it is such a frequent accompaniment of other diseases. In some cases of catarrhal pneumonia there is a certain amount of bronchitis attending the affection, the bronchial condition is found at the margins of the condensed lobules, so that in one lung or one lobe of a lung we may have a bronchial or catarrhal condition existing coincidentally with a pneumonia, and I think this fact frequently gives rise to an error in diagnosis. It is quite possible if two physicians were to examine such an affection for one to call it broncho-pneumonia and the other catarrhal pneumonia. Fortunately so far as treatment

is concerned the difference in name would not be of much significance. Again, some forms of the catarrhal variety might well be confused with the tubercular. The former is said to have no blood in the sputum while the latter has. Now in some forms of the catarrhal variety there is a tendency for the lung to break down, while the tubercular invariably does so, and where such a condition takes place, the sputum is liable to be blood-tinged at one or other time during its course. Hence it is that the names given to these conditions are sometimes arbitrary, and that clinically we find the symptoms and sometimes the physical signs of one disease applicable also to another. Pneumonia is sometimes a complication of erysipelas, and in such cases there are none of the symptoms of pneumonia present, but on examination of the lung, the usual physical signs of the disease are present including dulness and bronchial breathing. These patients do not suffer from much respiratory distress, and the disease may be regarded as latent in them, it is nevertheless a fact that such an association does sometimes exist. Again in asylum life, conditions nearly allied to what we sometimes see in erysipelas sometimes takes place, such as when a patient dies suddenly, and on post-mortem examination we find

consolidation of the lung, yet during life the condition of the patient did not suggest by symptoms or otherwise anything of the kind. The lobar pneumonia should occur among the insane tolerably frequent, in both its distinctive varieties — lobar and lobular — is what we should reasonably expect when we bear in mind what is frequently the cause of the disease, and how careless these unfortunate people often are about their clothing and their personal warmth. Other unfavourable forms of pneumonia are the septic, arising from inhaling foul smells, and it often leads to gangrene. But gangrene of the lung may be the cause of death in pneumonias which are not of septic origin. It may begin as a tolerably mild form, affecting one lobe at first. This termination I have sometimes seen in feeble old people over 65 years of age. Closely related to the latter kind is the pyaemic form in which abscesses develop rapidly in the lungs. Pneumonia is frequently the cause of death in diabetes, also in delirium tremens, and occasionally in Bright's disease, and scarlet fever. In mania it sometimes puts an end to life, as it does also in cases of dementia, and it is interesting to note, how these patients are sometimes aroused from a lethargy and silence which has existed for years, and begin to speak sensibly as they approach the agony of death, as if reason were once more returning, during their last moments of conscious existence. Pneumonia also coming on in the course of heart disease, invariably leads to a fatal

result. When they both exist in the same subject, there is produced, as we may well understand, great lividity of the surface of the body, most urgent and distressing dyspnoea, and the spitting of pure blood.

It should perhaps have been mentioned earlier that herpes labialis is a frequent symptom in this disease, and some authorities indeed assert that it is almost pathognomonic of pneumonia. That it is frequently present in the lobar variety of the disease, we willingly admit, when the attack is a fairly acute one; but that it is present in all forms of the disease apart from the severity of the attack, or the form it may assume, we most unhesitatingly deny. We do not at all see it so commonly in the slow lingering forms of pneumonia as we do in the acute, nor in the lobular variety as in the lobar. In the latter variety we do not find it in mild cases, as a rule, such as when the temperature is not high, or when the expectoration is slight or absent. Nor again do we find it usually in the lobar variety of the disease, when it assumes a severe form, when the temperature reaches or exceeds 105° F. or when part of both lungs are involved. We find it in those cases ending in a crisis, and seldom see it in cases in which complications arise, such as pleural effusion.

The delirium attending pneumonia is a symptom of frequent occurrence, — even in tolerably mild cases there

may be delirium. There are degrees of it. In mild cases, there may be only an occasional smuttering, which by arresting the attention of the patient, he may stop, and he excuses himself by saying "I did not mean that". Not infrequently it may assume the form we see in delirium tremens, when there is active work of some sort going on, or, at least, active conversation, even in mild cases of this form the patient's attention may be arrested, and for a time at least made to be quiet. But the most severe form is when the patient becomes positively maniacal, and kicks about with his feet, and strikes out with his fist and hands, and threatens any one who comes near him. In such cases the patient must have two or more strong attendants to keep him in bed & keep the bed-clothes over him. When in this state they frequently threaten, and do often strike their attendants. It is said that the wild delirium we sometimes see in these cases is due to the patient having previously been addicted to the free use of strong drink. This may account for its appearance in some cases. But we have seen very wild delirium in perfectly abstemious people, who were beyond all suspicion of such excesses. When we bear in mind that the patient for the time being may be insane, and not accountable for his actions, it is a plea for constant and attentive nursing in pneumonia, for how frequently do we hear of patients

getting up in their delirium, and going out at the door, or perhaps, at the window, and being either killed or drowned, while the attendants or nurses were temporarily absent. The degree of delirium is in proportion to the severity of the disease. In mild cases with moderate fever, it may only show itself by slight rambling occasionally. In severe cases with high temperature it may be maniacal, when the patients want to get up and do something, and if hindered, may threaten and strike his attendants. Of whatever degree the delirium may be it disappears with the subsidence of the temperature. Those patients who have suffered from the severe form, have no recollection of what has transpired during the time they had been nursed, and their mind is a blank to all they had been attempting to do. The final stage in cases of pneumonia which prove fatal is usually coma. This comes on comparatively late in the disease. We have already mentioned that heart failure takes place early, but not however till the disease is fairly established. It is said that delirium tends to pass into coma in fatal cases, and this is no doubt true. But we witness general phenomena, which are indicative of a fatal result, before the comatose state actually sets in; - the tongue becomes dry, the surface of the body assumes a dusky or livid

appearance, cold sweats bathe the body, the extremities tend to become cold, the veins get distended, and the right side of the heart dilated; the pulse becomes quick, feeble, and intermittent; there is more or less distressing dyspnoea and anxiety, gradually the struggle for breath grows less painful and violent. The patient now gets more feeble, is drowsy, and tends to ramble; and when in this condition, he passes imperceptibly into a state of coma or profound unconsciousness, which lasts for a variable period, and then he gradually sinks.