

Lectures on the Nursing of Lung Diseases.

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CHAPTER IV.

(Continued from page 128).

PNEUMONIA.

THE most important and acute disease of the lungs is that form of inflammation of its tissues to which the technical term of PNEUMONIA is given. There are various forms of this disease, but, so far as the Nursing goes, there is no need to distinguish between them. The cardinal signs of inflammation are the same in the case of the lungs, as when any other part of the body is affected. In the first place, there is marked congestion of the tissues. As a general rule, only part of one lung is implicated; it may be the whole lobe of one organ, or only a part of a lobe; sometimes both lobes of the left lung are affected, or the whole of the three lobes on the right side. Comparatively rarely, both lungs are involved, and then it is almost unnecessary to say that the patient's condition is extremely grave.

Remembering the constitution of the lung, it will be easy to understand the changes which take place in Pneumonia. The blood vessels of the inflamed part become dilated and engorged with blood, and from them there exudes more or less serum into the soft elastic tissues of the organ between the air cells and the bronchi. Some of the thin-walled vessels rupture under the unusual strain, and so blood is poured out as well as serum, both into the air cells and into the surrounding tissues. So the elastic tissue of the lung becomes swollen and engorged with blood and soon, instead of being soft and spongy, becomes quite solid. Then the affected area is of course unable to expand and contract as in health, and the effusion compressing and blocking the air passages of the part, prevents the access of air to the cells and renders the whole of the affected area useless and unworkable.

A good illustration of the condition would be to take an ordinary sponge, the canals in which—like the bronchi in health—are quite pervious, but if the sponge be dipped in a solution of gum or any similar material, it will swell up, its interstices will be choked up by the fluid, and when this has dried the sponge will be heavy and solid and the canals will be closed up. The blood which is thrown

out into the air tubes is slowly squeezed out, by the increasing pressure of the solid effusion, into the nearest large bronchi, when it becomes mixed with the phlegm and gives the latter the tinge of prune juice, the typical expectoration of pneumonia, and the appearance of which must be immediately reported to the doctor. The greater the surface of the lung which is affected, the greater of course will be the constitutional effects upon the patient. As is the case with every other organ, or part of the body, the larger the surface which is inflamed, the greater will be the fever. In the case of the lungs, the latter will have a double result. The effect of a high temperature is first to irritate, and after a time to paralyse, the nerves of the heart. Consequently, whenever there is fever from any cause, the heart's action becomes more and more rapid, as is evidenced by a rapidly increasing pulse; and if the fever continues or increases, the possibility of heart failure must always be remembered. This point is emphasized, because it will be seen hereafter how the temperature of the body, in these cases, influences the treatment. In the next place, the strain upon the heart is necessarily increased in consequence of the difficulty thrown upon the right side of that organ to pump the blood through the lung. Practically, the circulation is blocked throughout the whole of the inflamed area, and the heart being unable to force the blood through the blood vessels of that area, necessarily exerts a greater power than is required in health, in its efforts to pass the blood through the remaining vessels of the pulmonary circulation. It can, therefore, be easily understood that the greater the surface which is inflamed, the greater will be the difficulty experienced by the heart in its work; and when this increased strain is combined with the depressing influence exerted by a high temperature it can be easily understood why so many patients suffering from inflammation of the lungs die from heart failure, rather than from the immediate effects of the Pneumonia. Nurses should always remember this fact, because they will then exercise the greater care to prevent their patients attempting any exertion which is not directly sanctioned by the doctor, for fear of increasing the stress already existing upon the heart. For example, the mere exertion of getting out of bed might be too much for the weakened organ and sudden syncope and death might occur.

(To be continued.)

[previous page](#)

[next page](#)