Heart Disease.

By Bedford Fenwick, M.D.,
Physician to The Hospital for Women, Soho Square.

(Continued from page 372).

With proper care and attention, they may go on living for months, or even for years, but their lives are always hanging on a thread. Any sudden or severe exertion, as for example, running to catch a train, or, indeed, any mental excitement, such as violent fits of anger, may throw sufficient stress upon the enfeebled heart to embarass its action and cause either faintness or sudden death.

Passing now to the consequences of Heart Disease, it is necessary for the nurse, in order to appreciate these, to remember the course of the circulation of the blood. This flows from the veins of the body into the right auricle, passes through the tricuspid opening into the right ventricle, is pumped from this through the pulmonary arteries into the lungs, and returning from them, purified and oxygenated, by the pulmonary veins, flows into the left auricle and thence over the mitral valves into the left ventricle, from which it is pumped through the aortic orifice into the aorta, and so into the general arterial system. Then the arteries, growing smaller and smaller, end in minute capillaries, which gradually unite together to form the veins, which, joining together and collecting the blood from all over the body, complete the circuit of the circulation by pouring their contents into the right auricle of the heart.

Let us take a homely illustration, and remember what happens in a crowded thoroughfare when a horse falls down, and for the time blocks the traffic. Cabs, omnibuses, and waggons, crowd up together but can only pass one at a time, and so the stream of vehicles lengthens back, street after street. After a time, those far behind turn into the side streets, and the police direct others to turn back; and so the block is gradually removed. So, it will be evident that any obstruction or any delay at the mitral orifice, will create a difficulty in the flow of the blood from the lungs into the left side of the heart. Such a difficulty means that the right side of the the heart is pumping into the lungs blood which the obstruction on the left side is preventing from easily passing through the heart; and so more or less engorgment or over-filling of the blood vessels in the lungs is caused. In consequence of this, the tissue, that is to say the air cells, of the lung becomes blocked while the air passages are also more or less compressed. At the same time, Nature attempts to relieve the pressure inside the blood vessels by squeezing out some of the watery part of the blood through their walls into the surrounding tissues. This exudation, as it is called, renders the lung tissue more or less sodden or dropsical; and so again the air cells or the breathing space of the organ is interfered with and diminished. This explanation, of course, like all which are given in these lectures, is not complete; but it is sufficient to explain the reason of the well-known fact that patients suffering from Heart disease, sooner or later, suffer from difficulty of breathing; and how, as the obstruction to the blood-flow increases by reason of the Heart weakness, so the amount of air space must tend to diminish, and the difficulty of breathing to increase.

Then, to take another step. If the congestion of the blood vessels becomes very great, the engorgment of the lung tissue with blood exudation may make part of the organ almost solid—when we have produced the condition known as inflammation of the lungs, or Pneumonia. So it will be evident why patients with Heart disease so frequently die of lung complications; and why, on the other hand, it is so extremely important to save such patients from exposure to cold or chills which, however trifling, or however harmless they would be to a person in ordinary health, may be quite sufficient to upset the already embarassed circulation through the lungs, and so cause this dangerous inflammatory state. Again, it is easy to understand why patients with Heart Disease, having the vessels of the bronchial tubes so congested, suffer from the exudation from the mucous membrane of the air passages or *Bronchi*, to which the name of Bronchitis is given.

Then, let us go a step further, and realise what is happening when the circulation of the blood through the lungs is being obstructed. Sooner or later, the back-pressure is felt upon the Right side of the Heart, and the right ventricle becomes unable to pump its contents as easily through the lung vessels as it does in health. So the blood being unable to pass easily out of the right ventricle prevents the blood from flowing out of the right auricle, and so obstructs the flow from the veins into that cavity.

(To be continued).

previous page next page