

Lectures on Elementary Physiology, in relation to Medical Nursing.

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LECTURE V.—THE NERVOUS SYSTEM.

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THE chief forms of paralysis with which the Nurse will meet are most frequently due to injuries to the brain substance, and therefore most frequently follow after an attack of what is called Apoplexy; but, as we shall see hereafter, the lower limbs may be paralysed, while the upper limbs retain their power of motion—a condition to which the name of *Paraplegia* is given—from diseases or injuries of the spinal cord. Or again, local paralyses, such, for example, as loss of power on one side of the face, may occur from comparatively trivial injury to the facial nerve, and be a condition only temporary and unimportant save for the disfigurement. But so far as the forms of paralysis due to injury of the brain are concerned, it may be said in general terms that the loss of power is usually limited to one side of the body; though, of course, this is a rule proved by many exceptions. The condition is known as *Hemiplegia*, and a typical case may be briefly thus described. The patient, on recovering consciousness, finds that he cannot lift one arm nor move the leg on the same side; the opposite limbs being, perhaps, as strong as usual. Occasionally, the loss of power is rather more gradual, the arm perhaps being paralysed at once, and the leg slowly losing strength till it also becomes paralytic. The loss of taste and of the special senses which often occur in these cases, and which practically represent paralysis of the sensory nerves, are matters to which reference will be made, hereafter.

The first point to be remembered in a case of hemiplegia is that sensation in the affected limb is almost invariably lost as completely as the power of motion. Consequently, the patient does not feel, nor complain of, injurious pressure, and thus the liability to the formation of bedsores on the affected side is greatly increased, and special care must be taken to prevent their occurrence. The warmth of the paralysed limbs is at once diminished by their loss of movement; and therefore it is always a good precaution, both for the purpose of maintaining their vitality and also for preventing bedsores, to wrap the

arm and leg in cotton wool, with a flannel bandage wound loosely round each limb. It is necessary to emphasize the importance of the bandage being loose, because the patient will not feel the discomfort if it be over-tight, and such pressure upon the already enfeebled circulation would be most injurious, and might even bring about mortification or gangrene of part of the limb. To assist the circulation and prevent pressure, it is also a good practical rule in these cases to raise the affected limbs on soft pillows, so that the venous blood can more readily return, while the liability to injurious pressure is, at the same time, diminished. The next point to be noticed in the Nursing of these cases—that is to say, as soon as the first acute symptoms have passed off—is to maintain as far as possible the nutrition of the affected limb until the nervous system has had time to regain its vigour and so to restore power to the muscles. If such attention be not given, the disabled muscles will gradually waste from lack of activity, and contracting, will draw the limbs into a misshapen position; while the skin, shrivelling over the muscles, in its turn, will leave the limb apparently reduced to mere bones, with a thin covering of integument over them. When this condition is reached, the chance of recovery is practically lost. Indeed, in the majority of cases it may be said that it is only by early treatment that effectual results can be attained. The first and simplest measure is to retain the activity of the muscles in some degree by passive movements; the Nurse bending and extending, for example, the hand upon the wrist, the forearm upon the arm, and the upper arm at the shoulder joint—by such regulated movements simulating those of ordinary health. Then friction, or a modified form of massage, is a valuable adjunct to this treatment; the muscles of the limbs being regularly rubbed and kneaded two or three times a day, so that the circulation through them is assisted and their nutrition is maintained. A practical point in this connection is the great value of the use of cod liver oil instead of vaseline or cold cream as a lubricant in the massage of the limbs. Many doctors direct the Nurse to use a table-spoonful of cod liver oil to each limb. This being rubbed into the skin is to a certain extent absorbed, and thus both the muscles themselves are better nourished and the patient derives a general benefit.

(To be continued.)

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