

## Lectures on Elementary Physiology, in relation to Medical Nursing.

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### LECTURE V.—THE NERVOUS SYSTEM.

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WHEN the funnel should be lowered below the level of the patient's body, so that the fluid can, by syphon-action, run out from the bladder into a proper receptacle on the floor. As soon as the flow seems to be ceasing, the india-rubber tubing should be grasped between the finger and thumb so as, once more, to prevent the entrance of air, and the funnel and the part of the tube above the fingers is then again filled with solution, after which the former can be raised again and a fresh amount of injection given.

It is always well, in these cases, to give the injection out of a glass measure, so that the quantity injected into the bladder at one time can be most accurately estimated; and if the patient complains of pain, as occasionally happens, before the full quantity ordered for one injection has been given, the amount which has then been employed should be immediately noted, and afterwards reported to the doctor. And the nurse would be wise to permit the fluid at once to flow away, waiting for further instructions before she injects a larger quantity at any one time; but repeating the injection of the same quantity of fluid again and again as may seem necessary; because the instructions given by the doctor in such cases generally are, that the bladder should be filled and emptied again and again until not only have all the mucus and decomposed urine been removed, but also until the fluid returns from the bladder evidently and absolutely clean.

If an antiseptic solution is ordered to be used, it is of the utmost importance that its strength should be accurately measured, according to the medical directions. Because there are some drugs employed in this manner which, if given in large quantities, may themselves cause inflammation of the mucous membrane.

In the case of female patients, many doctors prefer that the catheter should be made of glass, because this can be rendered so abso-

lutely aseptic. A precaution which is necessary in the use of such a catheter is that it shall be most carefully examined each time before being used, to make sure that the glass is perfectly sound. It has unfortunately happened, on more than one occasion, that a crack existed in the glass and that, when the instrument was in the bladder, part of it broke off. As such an accident would necessitate the immediate performance of a somewhat difficult operation, in order to remove the broken fragment, it is scarcely necessary to insist upon the urgent need for the precaution mentioned. If, however, the accident occurred while the nurse was using the catheter, prompt action upon her part is called for. For example, she must remember that the jagged end of glass will tear the bladder wall and might even perforate it, with fatal results. The touch of a splinter of glass would cause the muscle of the bladder wall to contract spasmodically on the foreign body, and this would probably bring about more and more laceration of its substance. The common sense treatment, therefore, is obvious. The moment the nurse discovered that a glass catheter had broken inside the bladder she should pass an ordinary catheter and inject the bladder fairly full of water, so as to keep the walls distended, that is to say, as free as possible from contact with the glass, while she would immediately, of course, send for the doctor.

If the fragment, however, breaks off in the urethra—a fact which she would discover by finding it impossible to pass the catheter through the canal—she must, of course, make no attempt to extract the fragment herself, because the less disturbed it is, the less injury will it effect; but she should immediately report the accident to the doctor, so that he can bring the necessary instruments for its removal. With a less degree of importance, the same procedure is necessary when a fragment of an ordinary gum elastic catheter breaks off in the bladder, as occasionally happens. Many cases are known in which this accident has occurred, and in which the fragment has remained for weeks, or even months, unsuspected, until, having by its presence caused the deposition upon it of urates or phosphates, it has formed the nucleus of a stone in the bladder, which has in due course to be removed.

*(To be continued.)*

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