

## OUR PRIZE COMPETITION.

WHAT DANGERS ATTEND AN INTRAVENOUS INFUSION? WHAT ARE A NURSE'S DUTIES IN PREPARING FOR, AND ASSISTING WITH, SUCH AN INFUSION? WHAT WOULD YOU RECORD AFTER THE TREATMENT?

We have pleasure in awarding the prize this month to Miss Amy Phipps, F.B.C.N., Eden Cottage, Ashford, Middlesex.

### PRIZE PAPER.

The dangers attending an intravenous infusion and the points to be recorded as to the patient's condition after the treatment, would depend largely upon the specific character of the disease or condition calling for such treatment.

The dangers attending an intravenous infusion are in most cases avoidable, but sometimes occur even with the most skilled care and attention. They include: Air embolism, blood embolism, thrombosis, sepsis, collapse, rigors, dyspnoea, surgical emphysema, accidental severing of other vessels than the one for use in infusion, delirium due to the effects of raising the cerebral blood pressure and, through the latter effect, aneurysm, where predisposing causes exist in the vascular walls.

Where the treatment is employed to counteract shock after hæmorrhage, the raised blood pressure will, in some cases, re-start hæmorrhage.

Locally, there is danger of hæmatoma, abscess, œdema, hæmorrhage, and temporary blocking of small vessels, causing numbness, &c. The nurse's duties in connection with the operation are: The preparation of instruments and materials for the operation, which include: Saline solution; this is usually prepared in the laboratory, and is made with distilled water so that it is devoid of free oxygen and is absolutely sterile. Sodium chloride; tabloids or powder, very accurately triturated, are usually employed for this solution. Care must be taken that the preparation is kept free from any contamination. The nurse will see that the supply of saline solution, with any drug ordered, such as pituitary extract, is close at hand, also the apparatus to be used for infusion. The apparatus varies from a fine nozzle, preferably of metal, and a piece of india-rubber tubing, with funnel or irrigator, to a more elaborate graduated vessel, with thermometer attached, and in which the standard temperature can be electrically maintained. The whole must be carefully sterilised before use, and kept sterile.

Other requirements are: Iodine for preparatory dressing, sterile towels, clips, swabs, dressings, and bandages; sterile bandage and tourniquet, mackintosh, scalpel, dissecting forceps, dissector, artery grips, small retractors, aneurysm needle, skin needles, strong catgut to ligate the vein, and horsehair or silkworm gut skin sutures, sterile water, hot and cold, an operating table in a good light, sterile gowns, caps, &c., and preparation for anæsthetic.

There should also be quite ready restoratives in case of collapse, as this occasionally occurs from the sudden raising of the blood pressure.

The vein usually chosen is the median basilic, one of the superficial veins near the bend of the elbow.

This field of operation will be prepared according to the wishes of the surgeon in charge, and will, of course, depend to some extent upon the urgency of the need for treatment. In any case, absolute asepsis in detail is of the utmost importance, and is the nurse's responsibility to a great extent. The mackintosh is placed under the limb, and the towels placed in position and secured with clips; a tourniquet is often applied to make the vein more prominent. When the surgeon has isolated the vein, two ligatures are thrown round it at a distance of about half an inch; the lower one is tied tightly, and the upper left loose; an opening is then made in the wall of the vein, and the nozzle inserted and fixed in position by tightening the upper ligature over it; it is of very great importance that the apparatus should be filled with fluid before insertion, to prevent the injection of any air. The required amount is allowed to flow in slowly, the nozzle is withdrawn, the upper ligature drawn tight, the skin wound closed by a stitch, and sterile dressings applied.

The nurse's duties at the time of operation will vary according to the presence or otherwise of a second medical assistant, but she will be responsible for the details of preparation of all articles for use, of the good working order of instruments, of the temperature of saline, &c. She will also see that the patient is kept as calm as possible, and free from anxiety over the operation.

The rate of flow is usually fifteen to twenty minutes to the pint; if the rate is greater, or the temperature too low, rigors and dyspnoea are likely to result.

The points to be noted after treatment are: Temperature, rate and condition of pulse to be noted continually, type of respiration, any blueness or pallor of skin, or other sign of hæmorrhage; any signs of faintness due to reactionary depression to be watched for; locally, any redness, numbness, discoloration, swelling, pain, obvious sign of bleeding. The patient's general condition must be watched carefully and reported upon, the conclusions arrived at being largely influenced by the original condition of the patient.

### HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss P. Thomson, Miss E. A. Noblett, Miss Ethel M. Taylor.

Miss E. A. Noblett, writes:—"The patient is very likely to have a chill about twenty or thirty minutes after an intravenous infusion, especially when normal saline solution is used. The cause of this is not definitely known. Usually the chill soon ceases and is not followed by a rise of temperature or other untoward effects, but the patient should not be left alone while it lasts, and, if conscious, must be reassured. The patient must be kept warm with hot-water bottles and blankets."

### QUESTION FOR NEXT MONTH

In what various ways may drugs be administered? Describe the procedure in each case, and the principal precautions to be observed.

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