

## OUR PRIZE COMPETITION.

WHAT IS A "SALINE" (SALINE FLUID)? GIVE ITS USES, AND DESCRIBE THE METHOD OF GIVING A RECTAL SALINE?

We have pleasure in awarding the prize this week to Miss E. A. Noblett, 2nd Northern General Hospital, Headingley, Leeds.

### PRIZE PAPER.

*Normal Salt Solution or Saline.*—A solution of common salt in water is so called because the proportion of salt in the water is the same as that in the blood. In making the solution, sterile filtered water and common table salt are used. To two pints of water are added two and one-quarter teaspoons of common table salt. The solution is filtered through filtering paper into sterile glass flasks, free from the least speck of dust or foreign particles. The filtering is repeated until not the smallest sediment can be detected. The solution is then sterilised.

*Its Uses.*—The saline is in common use at the present day as a substitute for irritating antiseptics, its action being mildly antiseptic and stimulating. In this respect it may be used for dressing wounds, where the surface is extensively denuded, as in burns, in douching or irrigating the bladder, vagina, or rectum. Some surgeons use it in operations involving the serous membrane, especially in irrigating the peritoneal cavity.

Its most important uses, however, are to restore fluid to the circulation after hæmorrhage, for the relief of thirst, especially following an operation, and as a means of stimulating the system in conditions of collapse, shock, and lowered vitality.

Fluid may be restored to the body by enemata of normal salt solution, by steepage, or constant rectal irrigation, by subcutaneous infusion, and, in the severer cases, by intravenous infusion.

The usual temperature is 110° to 105° F.; when given as a general stimulant, 120° to 110° F.; when employed to reduce bodily temperature, 70° to 60° F. In the two latter cases, the saline is given with caution, and the pulse is closely watched.

A saline is also used for other purposes: to irrigate the lower bowel in conditions of chronic enterocolitis, to cleanse the bowel before rectal feeding, for the destruction of intestinal worms.

In some chronic affections of the stomach, lavage of warm saline is given as a regular treatment. It should then be performed daily before breakfast.

*Technique of rectal saline.*—It should be injected as high as possible into the colon, and not more than one pint given at a time to favour retention.

A douche can containing the fluid is attached to the head of the bed, a little higher than the patient's pelvis. The tube is partially clamped, so that the fluid flows drop by drop. The can must be closely covered to retain the temperature, and the bed protected with a rubber sheet in case of oozing. A special short rectal tube, with an olive-shaped expansion, is generally easily kept in place.

Or, a special apparatus resembling a thermos bottle fixed in a stand is now generally used. The cork is fitted with two pieces of glass tubing, to one of which the rubber tubing is attached, the other introducing the necessary air to cause the solution to flow. The rectal tube is attached to the other end of tubing, and before inserting the tube, the solution should be allowed to flow to expel air in tube. The bottle is fixed in the stand and placed on a table a few inches higher than the mattress. The clamp is fixed so as to allow the fluid to escape drop by drop. The method is simple to handle, and has the advantage of keeping the solution at the required temperature. The fixed position the rectal infusion entails makes it a trying process for the patient, and every effort must be employed to make him as comfortable as possible by a judicious arrangement of pillows.

### HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss S. F. Rossiter, Miss E. J. Shepherd, Miss A. Phipps, Miss E. Bates, Miss E. Clarke, Miss E. M. Streeter, Miss H. M. Springbett, Miss A. B. Owen, Miss H. Kennedy, Miss D. B. Vine, Mrs. Farthing, Miss K. Kohler.

Nurse A. B. Owen writes:—Saline fluid consists of a teaspoonful of common salt dissolved in a pint of boiled water at a temperature of 105° F.

In cases of emergency, however, it is not easy to get boiled water, and if the water has to be boiled and then cooled, too much time is wasted, and hence it is necessary to risk the introduction of organisms by mixing the water from a kitchen boiler with a sufficient amount of ice or cold water, to reduce the temperature to the required degree.

A saline does good by giving the heart more fluid to act upon.

Miss Dora Vine writes:—"In cases of hæmorrhage, 'normal saline' is used to replace the volume of fluid lost."

### QUESTION FOR NEXT WEEK.

State briefly what you know of the symptoms and treatment of thrush, snuffles, and convulsions in the newly born.

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