

### ADMINISTRATION OF SALINES.

For the administration of a saline per rectum by (1) a single injection the following apparatus is required:—Glass funnel, catheter (size varying with age of patient), vaseline, swabs, measure containing a few ounces over the required quantity of sterile saline solution (sodium chloride  $\bar{z}i$ , water  $\bar{O}i$ ) at a temperature of 105° F. The catheter and funnel should be carefully sterilised by boiling before use.

If the patient is in a fit condition, the foot of the bed should be raised and the patient turned on to the left side with knees drawn up a little, a mackintosh and towel being placed under the buttocks to prevent soiling the bed.

A small quantity of saline must first be run through the tube, this being clipped before the complete amount has run through, thus expelling all air. Grease the catheter with vaseline at least half its length, and holding the funnel on a slightly higher level than the patient, insert the catheter well into the rectum with a firm movement, unclip the tube and allow saline to flow slowly in; at least half an hour should be taken to administer a saline of  $\bar{z}v$ . When almost all the saline has entered, the tube must again be clipped to prevent entrance of air, and the catheter gently withdrawn. Should the patient seem inclined to reject the saline, as is often the case in young children, a folded towel firmly pressed against the rectum for a few minutes is often satisfactory.

2. For the administration of a continuous irrigation, many methods may be used; where a "thermos" continuous saline apparatus is available this should be used, as the solution never loses heat and a catheter and Y-glass connection with two tubes can quickly be fitted up in place of the subcutaneous needles with which it is usually supplied.

Where no fixed apparatus is to be got, a catheter, glass connection, rubber tubing, funnel wrapped in cotton wool to keep saline warm, and attached to a chair back, makes an excellent substitute. The method of administration is similar to that of a single injection; great care must be taken to see that the saline is running very slowly, and that the funnel is never allowed to run empty.

In some cases a Higginson's Enema Syringe is used in place of the funnel, the nozzle being connected with the rubber tubing and the suction end placed in the solution in a measure, all being on a higher level than the patient.

#### GENERAL REMARKS.

In giving either saline injection, the patient must be kept quiet and exposed as little as possible.

The usual quantity of saline given in a single injection ranges from  $\bar{z}iv$  to  $\bar{O}i$ , consideration for age being made. For a continuous irrigation, given very slowly, as much as will be absorbed, up to  $\bar{O}ii$  or more, can be given; when signs of returning saline are noticed the catheter can be removed for a short time and the injection continued later. When an "open" method of continuous irrigation is in use, such as a funnel, gauze or some other substance must be placed over the mouth of the holder or funnel, so as to prevent contamination of the solution by dust.

### "SNOW-BLINDNESS."

A paper by Lieutenant-Commander E. L. Atkinson, read before the War Section of the Royal Society of Medicine, and reported in the *Lancet*, throws some fresh light on this subject, gained partly during service with Scott's Antarctic Expedition, 1911-1913, and partly in North Russia in 1919. As is well known, the ordinary symptoms are photophobia, lacrymation, and chemosis, coming on after an interval of several hours. In Commander Atkinson's experience the symptoms came on more rapidly, especially on entering a tent where a primus stove was burning. They also included slight hyperæmia of the retina, and later small corneal ulcers. Recovery, however, was the rule. The rays which cause "snow-blindness" are generally admitted to be the ultra-violet ones, which, being absorbed almost entirely by the cornea and lens, can in themselves have no direct action on the retina. Their action, however, was intensified by the excessive illumination of the Antarctic region, due to the countless ice crystals reflecting light into the eye from all directions. Exposure of the eyes for as little as fifteen minutes to these conditions was enough to cause the symptoms. In certain cases another symptom followed—namely, diplopia. This was probably due to the excessive strain on the external ocular muscles caused by the unusual diffusion of light, resulting in the absence of any stimulus making for the fixation of the two eyes on a single point. Prevention is easily attained by the use of glasses, which cut off some of the light rays and all of the ultra-violet ones. Probably the most effective are Crookes's glasses No. 2, and for long expeditions they should be provided with side-pieces to cut off the lateral light. For ordinary holiday-makers, such as the fortunate people who are about to spend a few weeks in the Swiss ski-ing and skating resorts, ordinary smoked glasses will be generally found to answer the purpose sufficiently well.

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