

sudation, or tryptic digestion, or emigration and phagocytosis, are all impeded by cold and favoured by heat.

METHOD OF APPLYING HYPERTONIC SALT SOLUTION SO THAT IT MAY PRODUCE AN ADEQUATE LYMPHAGOGIC ACTION, AND AFTERWARDS PROVIDE OPPORTUNITY FOR DIGESTIVE CLEANSING OF THE WOUND.

This will be the proper way of employing hypertonic salt solution in the infiltrated and sloughing wound. The following are the points to be borne in mind:—

(a) For the achievement of an adequate lymphagogic effect we must use quite considerable quantities of hypertonic solution. The dressings ought to come directly out of the hot solution, and be applied dripping wet.

(b) In order that there may follow upon the lymphagogic action a cleansing digestion, the amount of salt employed must be kept within such limits as will allow of its being within a reasonable period diluted by the outflowing lymph. In other words, we must not use too much hypertonic salt solution, nor use too concentrated a solution; nor supplement with large packs of saturated salt solution or salt tablets.

In order to anticipate that pullulation of microbes which will supervene when the exudate becomes tryptic we ought to redress the wound as soon as the discharge begins to be purulent.

The procedure in carrying out these principles will, of course, vary according to the anatomical conditions of the wound. In point of fact, three different anatomical types of wound have to be considered: (a) The wound which from the beginning lay fully open or which has been opened up so as to render every portion of its surface fully accessible; (b) the wound where, owing to folds, or blind passages, or a tunnelled way, portions of the surface are not fully accessible; and (c) tubular wounds which are throughout their whole course more or less difficult of access.

(a) In the first case we have only to pack the wound with gauze thoroughly wetted in hot 5 per cent. salt solution. We cover this in with any impermeable tissue, such as jaconet. When the time comes for redressing the wound, all trace of pus ought, before reapplying the saline, to be carefully removed. For pus treated with strong salt is converted into a sticky intractable substance which forms an impermeable coating on the walls of the wound.

(b) Where the wound is pocketed or tends to flap together the best procedure is to employ a bath of warm 5 per cent. saline. Should the position of the wound render immersion in a

bath impracticable, it ought to be irrigated with warm 5 per cent. saline solution, the fluid being distributed over the whole surface of the wound by an arrangement of bandages. The bath or irrigation ought to be discontinuous—intervals for digestive cleansing alternating with periods of lymphagogic and leucocyto-lytic action.

(c) Where we have a *tubular wound* it will, of course, be futile merely to insert a drainage-tube and cover its mouth with a piece of gauze wrung out of hypertonic salt solution. The rational procedure will here be to make windows in the tube, to cut it open longitudinally, and to lay into the hollow a folded strip of gauze, thoroughly wet with saturated salt solution. The tube thus armed is to be introduced into the wound after this has been syringed with 5 per cent. saline.

NATURE OF THE EXTERNAL COVERING TO GO OVER THE WET SALT DRESSINGS.

The most usual practice is to place immediately outside the saline dressings a thick packing of dry cotton-wool, and again outside this a bandage. This seems to be dictated by the idea that the cotton-wool will soak up the discharges, and the notion that the capillarity of the cotton-wool and evaporation from its outer surface will reinforce the drawing action of the salt. In point of fact, however, all the cotton-wool does is to suck out some of the salt solution from the dressings and to evaporate this to dryness, putting in this way a certain quantum of salt out of action. Moreover, the notion that capillary action and evaporation would promote drainage from the tissues is in conflict with everyday experience, which shows that when we apply a dry dressing or let a wet dressing evaporate, the outflow of lymph from the wound ceases, and the dressing sticks to its surface.

The rational method of covering in saline dressings is to use, instead of cotton-wool, an impermeable covering. Then instead of the salt solution being carried outwards by capillarity and evaporation, it will by diffusion be carried inward. The difficulty that with this form of dressing discharges will escape from under the impermeable covering can be met either by frequent re-dressing, or by placing cotton-wool outside the jaconet. In the case of wounds of the extremities, perhaps the simplest method of all is to dispense with all coverings over the salt dressings, merely renewing the salt packs at frequent intervals. But here, if we want to clean off sloughs or resolve infiltration, we shall have to alternate with our dressings of hypertonic saline solution dressings of physiological saline solution.

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