

THE TECHNIQUE OF THE CARREL-DAKIN TREATMENT.

Captain G. E. McCartney, C.A.M.C., and Captain F. H. H. Mewburn, C.A.M.C., have contributed a most interesting article to the *British Medical Journal* on the above subject, in which they say in part:—

In the following description of the method used in the Carrel-Dakin Ward, which has been in operation at the Duchess of Connaught Canadian Red Cross Hospital, Taplow, for fifteen months, standard methods are, as much as possible, passed over, and those details which have been introduced during the last year especially described.

The solution is prepared daily in the dispensary according to the method of Dr. Daufresne, tested for hypochlorite content, and sent to the ward in a carboy of amber glass, without the addition of the potassium permanganate. The solution is at once tested by one of the surgeons, and if found of correct strength, the potassium permanganate is added and the bottle stored in a closet until used.

All the Dakin bottles in the ward are fitted with a rubber cork, rubber tubing, and pinch-cock. This was found to be more satisfactory than closing the mouths of the bottles with cotton-wool. Pinch-cocks on both stopper and irrigating tube are opened when the solution is being used.

A series of tests conducted to determine the action of light on the solution in different types of protected bottles prove (a) that the brown duck covered bottle is the best for the protection of the solution, and (b) that, properly protected, the solution will retain its potency for at least forty-eight hours. Hence we use only the brown duck protected bottles.

A well-equipped dressing carriage is essential. A liberal supply of instruments, including eighteen pairs of thumb forceps, several pairs of scissors and sinus forceps, is needed. We use several syringes with rubber tubing and nozzle attachment to avoid any hand contact with wounds, also a separate container with long forceps for the use of the nursing sister, all instruments being sterilized after use by ten minutes' boiling.

We consider the disinfection of the Carrel tubes and the preparation of the vaseline pads most important. The Carrel tubes, after use, are syringed out with warm water, scrubbed with a brush, soaked all night in Dakin

solution, washed off with ether, and then boiled for thirty minutes in a caustic soda solution.

In the preparation of the vaseline pads, ordinary dressing gauze with eight or ten threads to the inch is entirely unsuitable, as it does not retain sufficient vaseline. Cheese cloth, with twenty-four threads to the inch, gives the best results. This is cut in strips, 6 in. by 4 in., one end turned up, and, in sets of twenty, dipped into hot vaseline. The surplus vaseline is drained off and the strips are placed neatly in layers, in a tin box with a perforated lid. This is repeated until the box is full, when the box is pinned up in a towel, and sterilized in the operating room. The resulting pads are thoroughly impregnated and adhere perfectly to the skin, allowing no Dakin solution to penetrate.

In the Dakin service at this hospital the medical officer invariably does all the dressings. This rule is rigidly enforced, as in no other way can there be certainty of the technique. It is possible for one medical officer to dress fifty cases a day, but it is difficult where his work also includes operations and clerical work. We have hence found two medical officers necessary for such a ward. As assistants we have one nursing sister (well trained), and two orderlies, one of whom may be an intelligent convalescent patient. Both nursing sister and head orderly are fixtures in the ward, as satisfactory team work and thorough asepsis are only obtained by permanent assistants. Their duties include no ordinary ward work, and are limited to the dressings and preparation of the same. One orderly looks after the sterilization and delivery of successive instruments; the other assists with the patients and on the carriage. The sister's attention is restricted to the carriage, handling all instruments and dressings by long forceps. In handing the medical officer the various instruments, tubes, and dressings, the sister's forceps are not allowed to touch those used by the surgeon.

The essential point of the dressing technique is that the wounds, tubes, and dressings, are on no account touched by the hands. Everything is handled solely by clean dressing forceps. No patient who is to be dressed should have Dakin solution less than two hours before the dressing. This ensures that the bacterial count is not diluted. After the old dressings are removed, a smear of the wound is taken on a clean glass slide, on which is marked the patient's name and the date. The slides are collected, and taken to the pathological laboratory, where the bacterial count is made and entered in a book, from which entries may be

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