

Medical Matters.

THE STERILISATION OF THE SKIN OF OPERATION AREAS.

Mr. J. Lionel Stretton, L.R.C.P., M.R.C.S., Senior Surgeon to the Kidderminster Infirmary and Children's Hospital, describes in the *British Medical Journal* the methods he adopts for the sterilisation of the skin of operation areas with iodine solution, which is a modified application of methods already described in that journal as practised by Dr. A. Grossich, of Fiume, Major Porter, and Professor von Eiselsberg in the Allgemeine Krankenhaus, Vienna. The method advocated by these authorities was to paint the skin with 10 per cent. solution of iodine, and this Mr. Stretton was unwilling to do owing to the tendency of iodine of this strength to produce acute dermatitis in some instances. He therefore decided to try the tincture of iodine *B.P.*, which is about one-fourth of this strength.

Mr. Stretton writes, in part:—Most surgeons will admit that occasional cases of suppuration occur in their practice for which they are unable to account. The most frequent are small stitch abscesses. They are generally attributed to the suture material, but I venture to think that such blame is often misplaced. Of all our preparations the one least under control is the sterilisation of the skin. It is impossible to perform or even to supervise the process, and we are therefore dependent upon the assistant or nurse who undertakes the duty. The results we obtain prove that it is efficiently carried out in the majority of cases, but it is improbable that amongst a large number occasional defects will not occur.

The ideal method is one which can be inspected by the operator, or one which will leave visible proof that it has been thoroughly carried out. If a substance could be discovered which would render the skin sterile when painted over it, and leave a visible stain, there would be little chance of error.

The method I adopt is to paint a wide area of the surface to be operated upon with the iodine solution previous to the administration of the anaesthetic. It is painted on very freely, especially over hairy parts, and allowed to soak in. It is again painted immediately preceding the operation. After the stitches are inserted they are painted over for a margin of an inch all round.

The first and only dressing is usually made on the eighth day; the stitches are then removed, and the line of incision with a margin of one inch is painted with the iodine solution. If for any reason the wound requires to be inspected at an earlier date, it is painted as above described.

No previous preparation of any kind is undertaken—no bath, no scrubbing, and no shaving. The latter is an important point, because it saves the patient a good deal of after-discomfort. This is at variance with the method previously referred to, and combined with the weaker solution of iodine constitutes the difference.

The solution I use is made of 1 part liq. iodi fort. *B.P.* and 3 parts of spirit. The spirit is made by mixing equal parts of spt. vini meth. and distilled water. It is practically the same strength as the tincture of the *B.P.*, but it is cheaper, owing to the use of methylated spirit. This is a consideration not to be neglected in a hospital where large quantities are used.

I have no means of verifying my results by bacteriological investigations, but practically they are so uniformly satisfactory that I feel justified in bringing them forward. My reasons for advocating the use of iodine solution are:—

1. That it is an efficient method of skin sterilisation.
2. The surgeon can be absolutely certain that it has been applied.
3. It is quickly and easily applied.
4. It saves the patient the suffering of a preparation which is at present very lengthy and very disagreeable.
5. It obviates the necessity of shaving, which is unpleasant at the time and causes considerable irritation afterwards.
6. It saves an enormous amount of labour upon the part of assistants and nurses, and consequently a lessened expenditure.
7. It saves the cost of preparatory materials and dressings.
8. It can be used in emergency cases where preparation by the usual method is impossible.

In 57 cases in which this method of preparation was adopted, in which the ages of the patients varied from 2 months to 84 years, the iodine application in no instance caused the slightest discomfort. In 51 cases the result was "perfect"—*i.e.*, there was primary union without any suppuration, stitch abscess, or inflammation; 6 cases, including 2 of appendicitis, 1 colostomy, and 3 colotomies, were septic at the time of operation. The results in all these cases were satisfactory, and they healed with a minimum amount of inflammatory trouble.

The method is one with which district nurses should be acquainted as the elaborate preparations used in hospital and private practice are often impracticable in the homes of the poor.

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