

Medical Matters.

IODINE FOR STERILISATION OF THE SKIN OF OPERATION AREAS.

Major F. W. J. Porter, R.A.M.C., discussing in the *British Medical Journal* the use of iodine for sterilisation of the skin of operation areas, writes as follows:—That the importance of this subject is fully recognised by most operating surgeons is well shown by the numerous methods which are practised, and which need not be enumerated.

They are based on the knowledge that germs of various kinds lurk in the depths of the true skin, as well as superficially, and that they have an unhappy tendency to sweat on to the surface during the operation, and to infect the wound. The amount of labour expended on attempts to sterilise the operation area is very great, and the consumption of material correspondingly large. Occasionally, owing to "over-preparation," eczema results. For military or naval surgeons it is important to secure some method which is certain, rapid, and capable of being effected with a minimum of assistance and materials. For emergency work in private practice the method which I am about to advocate would be very useful. It consists in the use of a 10 per cent. spirituous solution of iodine. The idea is not in any way original, for I first learnt of it from a note of a paper by Dr. A. Grossich, of Fiume, in the *Epitome* of the *British Medical Journal*, of November 21st, 1908. Since that date the whole of my operation cases have been prepared as follows:—

The evening previous to operation the patient has a hot bath, using plenty of soap, but excessive scrubbing of the operation area is not permitted. It is then shaved, washed, and a piece of dry lint bandaged on. Nothing more is done until the patient is on the table. If eucaine is being used the area is *freely* painted with 10 per cent. spirituous solution of iodine (practically the liniment) and the eucaine injected. Before making the skin incision the area is painted once more. In the case of a general anaesthetic the iodine is painted before the administration is begun, and again when the patient is ready.

Preliminary scrubbing and wetting is not desirable, for Dr. Grossich points out that the superficial layer of the epidermis is not an absolutely compact tissue. The cells are loosely packed, and intercellular spaces exist which communicate with the external air by microscopic clefts. These clefts, which contain fat, sweat, and bacteria, are readily penetrated by an alcoholic solution of iodine, which dissolves their contents. On the other

hand, in the method of cleansing commonly practised, these clefts are likely to be closed by the swelling of the cells which is caused by hot water; or their contents may be retained by water and microscopic fragments of soap. For these reasons it is much more difficult to disinfect the skin by liniment of iodine after it has been cleansed by soap and water than if it had not been so cleansed and is quite dry. At the end of the operation the sutures are painted. . . I have obtained just as good results from using this very simple method as when I had the skin prepared the day before and again on the table, using turpentine, ether, soap, and mercury biniodide. The labour involved is enormously diminished, and a great saving of material is effected.

The potency of iodine as a steriliser of such septic material as catgut is now well known, and it is only reasonable to expect as good results in the sterilisation of the skin.

HOW ANTI-FEBRINE WAS DISCOVERED,

The story of the discovery of Anti-febrine is told in the section on Chemistry in "Science in Modern Life," the second volume of which is just published. The discovery occurred in the following manner: "Kahn and Hepp, two physicians connected with the University of Strasburg, were on intimate terms of friendship with a chemist of the Hoechst Works, when Knorr's antipyrine was being manufactured, and requested him to send them some chemically pure naphthaline, which they desired to use internally in the case of a patient suffering with some skin disease. They received the substance, and on administering it found that while it failed to exhibit the expected effect, it promptly reduced the existing fever. When the supply of naphthaline was almost exhausted they wrote for a further quantity. To their great astonishment the second supply, unlike the first, did not manifest any antipyretic action, and on comparing the two they soon discovered that a mistake had occurred somewhere. An investigation showed that when the first request was received the laboratory boy was directed by the chemist to fill a bottle with naphthaline, but through an error some acetanilide was sent instead. The second time the chemist himself filled the bottle correctly. Thus, through an accident, acetanilide was introduced to medicine, a remedy which to-day is used by the ton as an antipyretic and antineuralgic; and through the irony of fate the most powerful competitor of antipyrine was discovered as the result of a mistake in the very factory making enormous profits from the production of antipyrine."

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