

## Practical Points.

### Hand Sterilisation.

The ideal cleansing agent, says Dr. J. C. Webster (*Amer. Jour. of Obstetrics*), must be a solution capable of dissolving fatty matter and of penetrating the epidermis, strongly germicidal, rapid in action, and non-injurious to the skin. After long experimentations the writer suggests the unpurified clove oil as an approach to the ideal. After five minutes' scrubbing with soap and hot water the skin should be dried with a sterile towel and rubbed for one minute with alcohol to remove any remaining moisture. Clove oil is then rubbed into the skin for five minutes and afterwards washed off with alcohol. A slight burning sensation may result, but the skin is not injured. The hands should then be covered with dry sterile rubber gloves. Wet gloves macerate the skin, which may readily yield organisms which have not been destroyed through any undetected hole in the glove. The use of various "hand coatings," wax paraffins, and rubber solutions are not to be recommended, as they are prone to crack and peel off in long operations.

### Asepsis.

In an interesting address on the subject of Abdominal Surgery during the last twenty-five years, delivered at the Stoke Meeting of the Staffordshire branch of the British Medical Association, and which appears in full in the *British Medical Journal*, Dr. G. Stokes Hatton, F.R.C.S., made the following observations on the subject of asepsis:—

Although the principles of aseptic surgery are now generally recognised, the methods of carrying them out differ widely at different hospitals. The preparation of the patient's skin is generally left in the hands of the house surgeon, whose principles vary somewhat, according to the hospital at which he has received his training, but in all cases some antiseptic is applied the night before the operation, after a good scrubbing with soap and water and cleansing the skin with ether or spirit. The instruments are sterilised by heat, as also are the artificial sponges and the towels that are used to surround the patient. I have for a long time discarded marine sponges. Although I believe that the breath of the surgeon or his assistant, as also the hair, may be a possible source of infection, we have not yet commenced to wear masks, as is done in some places on the Continent, neither do we insist upon our nurses enveloping their heads in linen caps, though I have no fault to find with those who do so. I am firmly convinced that nearly everything depends upon the personal cleanliness of the surgeon and his assistants, and that when a wound has become infected it has been through the hands of one or other concerned in the operation; for this reason it is advisable that there should be as few assistants as possible. For the sake of argument, let us suppose that, if three people are concerned in an operation, the danger of conveying infection will be 1 per cent.; is it not fair to argue that, if six are concerned in the operation, the risk of infection will be increased to 2 per cent? There is no reason why the patient should incur this further risk. Now, whereas it is generally recognised that the hands are the chief source of infection, it is strange that authorities differ very much regarding

the best mode of preparing them before operation. First of all, there are those surgeons who, after washing their hands, soak them for several minutes in strong perchloride or biniodide of mercury solution. By these means they may render their hands fairly sterile, but in most cases it will have the effect of causing an erythema, or even eczema, which will greatly favour the development of germs, and even if the skin is sufficiently hardened to escape an erythema, it will in all cases be rendered so rough that the hands will not be thoroughly clean for at least a week. For my own part, I rely chiefly on soap and water, rinsing the hands in spirits of wine or turpentine to dissolve the fatty matter in the skin, and then washing again. After this I rinse my hands frequently in an antiseptic before and during the operation.

Many surgeons wear rubber gloves as a routine practice, but there are many objections to their use. First of all, they cause a hyperemia of the skin and an increase of the number of micro-organisms on the surface. Now, it is an easy matter to prick the finger through the rubber with a needle in sewing up a wound, and thus infect the patient. Rubber gloves are also very slippery, which makes it difficult to tie ligatures. To prevent this some wear cotton gloves over the rubber; but, although I have never tried this method, I cannot help thinking the wearing of two pairs of gloves must interfere with the sense of touch. I never wear gloves myself unless I am doubtful about the condition of my own hands or, in a very septic case, for my own protection.

It is a strange thing that, although so much has been written on the sterilisation of the hands, and although it is acknowledged that all attempts have failed to make them absolutely sterile, very little importance is attached to the advisability of preventing them from becoming infected. I am quite sure that dressers and nurses could avoid handling septic wounds and dressings more than they do. Familiarity breeds contempt, and where there are many septic wounds to be dressed it is difficult, perhaps, to avoid conveying infection; but with a pair of dressing forceps and plenty of artificial sponges it is quite easy to dress a case without touching any septic material.

I do not know why the hands should be regarded as the natural habitat of most pathogenic organisms. Possibly the time-honoured custom of shaking hands may be the means of transmitting many septic germs. I have often wondered if wearing gloves in daily life is really a means of keeping one's hands clean or otherwise. No one could dispute the fact that a clean pair of gloves put on for the first time must keep the hands clean; but what about a pair of gloves worn constantly for three or four weeks? You have all heard of the little boy who was reproved by his mother for having dirty hands. "Well," replied the boy, "shall I wash them or put on my gloves?" Now, I do not wish to intimate that medical men are ever guilty of putting on a pair of gloves to hide dirty hands; but what I do contend is this: that in the course of his practice circumstances occasionally arise when a medical man must of necessity contaminate his hands without having an opportunity of rendering them surgically clean. If he then puts on his gloves, will not the warmth, moisture, and lack of ventilation favour the development of micro-organisms? Probably the wisest course would be for medical men to wear washable gloves, and for such gloves to be washed frequently.

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