

Nursing of Diseases of the Eye.

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THE SPECIAL MANIPULATIONS OF OPHTHALMIC SURGERY.

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The care and preparation of the instruments necessary for operation may fall to the nurse. Thorough cleansing and sterilising is a most important matter. There can be no doubt that in many instances at least, if not the majority, when wounds are infected, it is by the micro-organisms carried into them on the instruments used at the time of operation. In other situations this is even more the case than in the eye, because in them the seat of the wound and the covering dressing can be sterilised. Neither of these precautions can be taken with certainty in the case of wounds of the globe. There can be no doubt that the most efficient sterilising agent is heat, but the heat must be applied for a considerable time; no mere dip in and out of boiling water is of the smallest avail.

All instruments except such as have cutting points or edges should first be carefully scrubbed with soap and a nailbrush (the teeth of forceps should receive special attention), and then boiled for at least a quarter of an hour, especially if they have been used for septic cases. Plain water may be used, but discolours the instruments more than if a little soda be dissolved in it previously.

Special instruments should be kept as far as possible for use in cases that are known to be septic, and should be sterilised with especial care. The question of the preparation of cutting instruments is a more difficult matter. There can be no doubt that repeated boiling for long periods destroys the edge and temper of knives, but their immersion in any disinfectant has the same effect. (It has been shown that absolute alcohol is not an efficient bactericide.) If the knives are first carefully cleaned and then placed in boiling water for $1\frac{1}{2}$ or 2 minutes, the process is scarcely detrimental, if at all, to their sharpness, and is practically efficient except when a knife has been employed in markedly dangerous cases previously. Here the time of boiling must be prolonged, or the short immersion repeated two or three times at intervals. Some surgeons refuse to admit this method to be harmless, and abjure heat entirely as a disinfectant for knives. They trust to ordinary cleansing and immersion in alcohol, or a weak solution of formal.

Instruments should be cleansed and sterilised both before and after use.

When sterilised and dried, the instruments must be put carefully away. Formerly they were to a

large extent kept in boxes, which were lined with velvet. This is not at all advisable, as the pile becomes thick with dust, to contaminate any instrument which is placed in contact with it; better, but still objectionable, are the wooden cases of hard wood varnished, with a space cut for each instrument. Best of all are glass cupboards with glass shelves on which the instruments are laid. Knives and needles must always lie in a rack to prevent their edges and points coming in contact with any hard material.

When the operation is to be performed, the point and edge of any knife and needle used must be tested before sterilising. In many instances the surgeon will trust no one to do this but himself, but it may fall to the duty of the nurse. For this purpose a "testing drum" is required, a piece of very thin kid on a frame stretched tight. To test a knife lay it almost horizontally on the hand, and hold the drum so that the kid is vertical, now press the knife against the kid. The point should penetrate with a barely perceptible resistance, smoothly without noise or jerk. It must be passed on so that the whole edge may be tried; with a little practice considerable knowledge of the state of the knife may be gained by this. In testing a needle even more care is required than in examining a knife; not only must the cutting edge be sharp and the point smooth, but the lance head of the needle must make a hole sufficiently large to allow the shaft of the needle to follow it without undue pressure, and at the same time not so large as to allow the aqueous humour to escape along the shaft. We must, therefore, not be satisfied by feeling the needle pierce the kid smoothly and without effort, but must notice that the needle can be passed on through the kid to the requisite depth without hitching. A needle that has been sharpened once or twice is rarely able to do this, and its life therefore is shorter than that of any other ophthalmic instrument.

The nurse may be called upon to give a hypodermic injection on various occasions, either of morphia for the relief or prevention of pain, or of some other drug which is administered in this way.

Most commonly such injections are made into the arm, occasionally where their local effect is required they may have to be injected beneath the skin of the lids or beneath the conjunctiva.

The syringe and needle should be carefully cleansed and sterilised before use. For this reason older syringes whose pistons were packed with leather, are objectionable, as they cannot be sterilised satisfactorily. The solution should be drawn into the syringe in a little larger quantity than is required for the injection, and the needle attached. The piston is then gently

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