

FIGURE 2.

operating table, and to be tilted if desired. A strip of adhesive tape 2 inches wide across the hand or wrist is used to hold the arm in place. The chain B prevents the parts from being separated when the holder is not in use. The apparatus was

made in the machine shop of the School of Medicine, Temple University.

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CONTINUOUS SPINAL ANESTHESIA: A METAL PROTECTOR FOR THE NEEDLE DURING OPERATIONS *

On certain operating room tables the special mattress used for continuous spinal anesthesia cannot be employed. Then too there may be hospitals in which the mattress for continuous spinal anesthesia is not part of the standard equipment and thus use of this valuable spinal anesthetic procedure is precluded. The various divisions of the mattress designed for use with continuous spinal anesthesia may not be opposite the special breaking points of the table when it is put in Trendelenburg position. In these circumstances and also when the patient is placed in certain other positions, the piece of apparatus which we are describing is valuable as a protection for the needle used for continuous spinal anesthesia.

The apparatus has acquired the name, "bishop's hat," which partly describes its shape and use. This piece of equipment resembles the shape of a hat and is made of metal (fig. 1). It consists of a brim 2 inches (5 cm.) wide with a crown 4 inches (10 cm.) wide and 2 inches (5 cm.) high. From the center of the hat running later-

ally to the edge of the brim is a slit $\frac{1}{2}$ inch (1.3 cm.) wide to allow exit of the tube which is attached to the needle used for continuous spinal anesthesia. This permits the rubber tubing to come from the spinal needle up the side of the table, without sustaining any pressure from the metal covering. If the spinal needle used for continuous spinal anesthesia is overly long, or the patient is unusually thin and the needle would strike the inside of the crown, it may be bent at a right angle and the end attached to the rubber tubing will protrude through the slit in the metal. The metal brim of the hat does not rest directly on the patient as it is cushioned with a pad of sponge rubber 1 inch (2.5 cm.) thick. This cushion has been sewed to the brim with heavy cord through holes in the brim. This apparatus permits use of the mattress which ordinarily belongs to any particular operating room table.

If the patient is to lie on his back, the apparatus is applied to the back of the patient after he has been moved to the edge of the table and still is lying on his side. While the anesthetist holds the metal covering in place, the patient is

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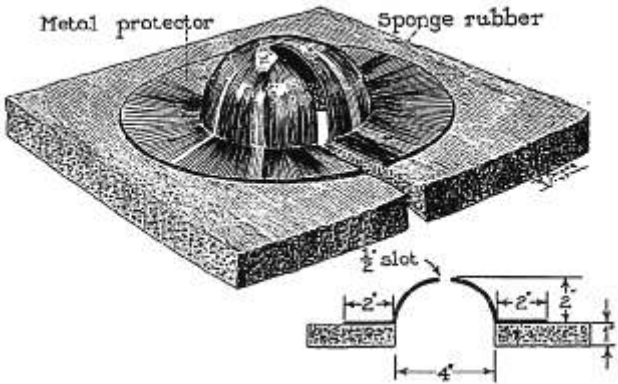


FIG. 1. The metal protector for needle used in continuous spinal anesthesia.

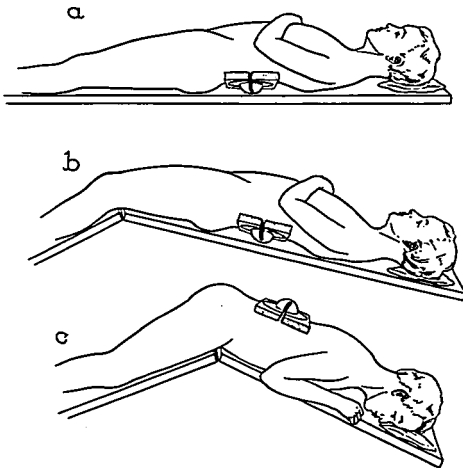


FIG. 2. The metal protector for needle used in continuous spinal anesthesia is in place; a, patient lying on his back; b, patient in Trendelenburg position; c, patient lying on abdomen, "bishop's hat" protects the needle from the surgeon and his assistant.

rolled on to his back (fig. 2a). The patient then can be tied more securely to the operating table; that is, shoulder braces can be applied, ankle straps attached and so on.

After about ten minutes have elapsed following the completion of the spinal anesthetic procedure, the table may be broken and the patient placed in the Trendelenburg position (fig. 2b). Subsequent additions of 30 to 60 mg. of 3 per cent solution of procaine hydrochloride may be injected within the subarachnoid sac while the patient is in this Trendelenburg position providing the spinal needle is not inserted higher than the interspace between the spinous processes of the first and second lumbar vertebrae.

For those operations in which the patient is lying on the abdomen and the hips are elevated, this same apparatus may be placed over the needle to protect it from the arms of the surgeon and his assistants and from the weight of instruments which may be lying on the patient (fig. 2c). When the patient is in this position, the apparatus must be strapped securely in place with adhesive tape as

weight is not placed on it to help secure it firmly to the skin.

SUMMARY

A "bishop's hat" is described which is designed to protect the needle employed for continuous spinal anesthesia under certain conditions as follows: (1) when the mattress usually used for continuous spinal anesthesia is not available; (2) when the special mattress for continuous spinal anesthesia is not applicable to the particular table because its sectional divisions do not meet the breaking points of the operating room table, and (3) when the patient is lying on his abdomen, for it serves as a protection against interference from the movements of the surgeon and his assistants.

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