

stimulation using a plastic or rubber suction catheter so introduced was tried in 32 cases where hiccups occurred. In 26 of these cases, the anesthetic technique was nitrous oxide-oxygen-curare, and in 6 cases halothane-nitrous oxide-oxygen was used. Oral endotracheal intubation had been performed in 31 cases, and in one case a mask was used.

In all of these patients, nasopharyngeal stimulation resulted in immediate cessation of the hiccups. In 4 cases, hiccups recurred but were successfully treated with the same method. The mechanism by which nasopharyngeal stimulation abolishes hiccups during anesthesia is not known. It can possibly represent a situation in which one reflex inhibits another reflex. We had the opportunity to use the maneuver in 3 conscious subjects; an 18 month old awake infant, a patient undergoing suprapubic prostatectomy under spinal anesthesia and a patient with subphrenic ab-

cess. In all three patients, there was immediate cessation of the hiccups. The remarkable success we have experienced with nasopharyngeal stimulation to treat hiccup suggests it is a useful method for controlling hiccups during anesthesia and perhaps in the treatment of persistent hiccups in the conscious subject.

REFERENCES

1. Best, C. H., and Taylor, N. B.: *Physiological Basis of Medical Practice*, ed. 2. Baltimore, The Williams and Wilkins Company, 1961.
2. Grant, J. C. B.: *A Method of Anatomy*. Baltimore, The Williams and Wilkins Company, 1952.
3. Wylie, W. D., and Churchill-Davidson, H. C.: *A Practice of Anaesthesia*, ed. 2. Chicago: Year Book Medical Publishers, Inc., 1966.
4. Butt, H. R., Jr., Hamelberg, W., and Jacoby, J.: Hiccups: its possible cause and treatment in anesthesia. *Anesth. Analg.* 40: 181, 1961.

GADGET

A Mechanical Aid for Positioning Psychiatric Patients for Spinal and Epidural Anesthesia

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Spinal and epidural anesthesia are well tolerated by many patients in mental institutions. Insertion of the lumbar puncture needle, however, often requires special consideration because many of these patients resent pressure around the head and neck and resist when placed in the lateral recumbent position. They will usually, in our experience, tolerate the sitting position without objection. This report describes a mechanical aid to make use of this position with optimal flexion of the spine with a minimum of effort.

Our technique consists of sitting the patient at the far end of the table with the head sec-

tion completely lowered and the foot section turned down far enough to permit the patient to sit up and lean with his full weight against a special appliance, the Zollinger *leg* holder,¹ used in this instance as a support for the *torso*. The crossbar of the holder, padded to a small roll, is placed in front of the lower abdomen (fig. 1) close enough to eliminate forward motion in the hip-joint and to serve as a fulcrum over which the lumbar spine can be flexed. With the sockets on the side rails approximately at mid-thigh level, far enough from the hip joint for the patient to sit up, the holder is inserted into the sockets and brought to a point approximately 4 cm. above the thighs. The leg straps are then removed, and the foot

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section, with a footplate attached, is lowered at least 20 degrees. The footplate adds to the patient's safety, his feeling of security, aids in symmetrical positioning and serves to elevate the legs above table level. The patient, after a slight forward tilt of the operating table, is helped to sit up. After readjustment of the holder and repositioning of the patient, the appliance should rest under his costal margin. He then puts his chin on his chest and leans forward until his arms rest on his thighs. At the actual moment of the lumbar puncture, an appropriate amount of downward pressure on the back of the neck will result in optimal flexion of the entire spine. The forward tilt of the operating-room table can be further increased in order to bring one's own eye level close to the horizontal plane passing through the interspace.

With obese patients, the positioning of the holder and the flexion of the spine may be more difficult; and better use can be made of the holder as a support in what might be called the "chin-hook" position (fig. 2). Here, the holder is covered only by a small towel and placed slightly above shoulder level. The patient "hooks" his chin over the central part of the appliance. Although support at the forehead may give a greater degree of flexion, it does not appear to be as safe for our purpose. With a precarious intravenous in place, we use the "arm rest position." The holder is attached close to the end of the table and the patient rests his arms on its indentations, with

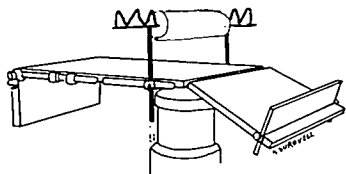


FIG. 1. Fulcrum position. Diagram of operating-room table.

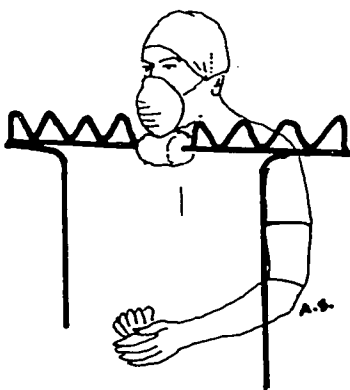


FIG. 2. Chin-hook position. Diagram—patient's chin hooks crossbar.

armboards under *both* arms, to keep the shoulders even.

We have found the technique described well suited for mental patients. It is a simple maneuver, easily understood and executed. Nothing is said or done to draw any attention to the back or to cause any inappropriate response. With a minimum of coercion, there is adequate flexion in patients of almost all psychiatric levels of cooperation. The method is particularly useful for patients with impediments of motion of the lower extremity, especially for those with plaster casts. Basically, the appliance acts as a mechanical assistant. With its rigid enclosure of the patient, and its predetermined points of contact with the body, it offers protection for the patient, standardization of the procedure and is useful in situations where personnel are limited or untrained.

REFERENCE

1. Zollinger, R. W.: Holder for two legs, *Surgery* 39: 982, 1956.