

anesthesias by this method. . . . Procaine hydrochloride was used in all of our 308 cases. . . . The technic employed is essentially the same as described by Dr. Lemmon. . . . Pre-operative medication has proved to be very important in continuous spinal anesthesia. . . . Usually $1\frac{1}{2}$ grains of nembutal the night before operation and $1\frac{1}{2}$ grains of nembutal orally and $1/200$ of scopolamine hypodermically one hour before operation is quite ample for these patients. In perineal or abdominal gynecologic work we give $1\frac{1}{2}$ to 3 grains of nembutal the night before operation and $1\frac{1}{2}$ grains of nembutal two hours before operation. One-half hour before operation a hypodermic of $\frac{1}{4}$ grain of morphine and $1/150$ of scopolamine is given. Most of these patients sleep during the entire operation and afterwards for five to six hours. Frequently they will remember little about the operation or even the insertion of the spinal needle. All cases received $\frac{3}{8}$ grain of ephedrine sulfate with the novocaine used to infiltrate the skin for the needle. . . . In the analysis of all of our cases, both obstetric and gynecologic, under continuous spinal anesthesia, postoperative headache occurred in 6 per cent, urinary retention in 7 per cent. There were four pulmonary complications; two were bronchopneumonia and two were atelectasis. There were no motor or sensory disturbances. There was one death. . . . This patient was 78 years of age and died eighteen hours after operation following removal of a large sarcoma of the pelvis. Her death was proved to be from hemorrhage. We do not believe that the anesthesia was a contributing factor in this fatality. . . . Recently, we have been using continuous caudal anesthesia in some of our cesareans to compare its value with those done under continuous spinal anesthesia."

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BAPTISTI, ARTHUR, JR.: *Continuous Caudal Analgesia in Obstetrics; A Commentary.* Am. J. Obst. & Gynec. 48: 103-108 (July) 1944.

"The science and art of obstetrics are built on the concept of the normal mechanism of labor. In our search for the ideal obstetrical analgesia we have always insisted on the rigid adherence to the criterion of 'no increase in operative deliveries.' Hingson and Edwards would rely on the perineal relaxation to justify their obligatory forceps deliveries. It is true that the muscular relaxation does facilitate the immediate problem of delivery to a degree but caudal anesthesia does not relax the bony pelvic ring. The sequelae of forceps deliveries do not usually become manifest until some time later. Every gynecologist realizes that many of his plastic operations are necessitated because of a forceps delivery done some years before. Hingson and Edwards recommend delivering the patient 'when the presenting part can be seen by spreading the vulva.' In this role the relaxed perineum becomes a two-edged sword on that one can visualize the presenting part at a comparatively high station when the relaxed perineal muscles are spread apart. . . . Caudal anesthesia is no safer today than it ever was. The present practice of using an indwelling needle or catheter in the sacral canal between injections has done nothing but increase the hazards. Although the ever present danger of vascular collapse probably remains the same, the risk of accidental dural penetration is increased. The hazards of needle breakage and infection have been added. The fact that any therapeutic procedure carries a risk does not necessarily condemn its use in medical practice, the art and science of which are made up largely of the balancing of risks and probabilities. However, the use of such a hazardous procedure

electively to relieve the usually innocuous pains of labor is unjustifiable. Since the recent advent of continuous caudal analgesia four women have lost their lives because of the procedure per se. There have been other 'close calls' reported. There must be other fatal or near fatal accidents which were not reported. . . .

"The test of time will put continuous caudal analgesia in its approximate place in obstetrics and until this comes about we must hope that the minimum number of mothers will suffer harm." 13 references.

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FATTI, L., AND MORTON, H. J. V.: *Pentothal Anaesthesia in Bronchoscopy*. Lancet 1: 597-598 (May 6) 1944.

"Local anaesthesia for bronchoscopy, using cocaine or newer substitutes . . . is probably employed in most clinics in this country. With the introduction of barbiturates of very rapid action it has become possible to spare the patient discomfort by superimposing light general anaesthesia on adequate local preparation. . . . During the past five years we have evolved a technique which . . . has proved highly satisfactory in the last 600 consecutive cases. . . . The average adult receives 'Omnopon' grain 1/3 and hyoscine gr. 1/150 an hour before operation; the dose is reduced for extremes of age or debility. It is essential that the hyoscine should take full effect, as shown by dryness of the mouth; if it does not do so, atropine sulphate gr. 1/100 intravenously may be given in addition. We are convinced that premedication helps to prevent spasm. . . . The patient is placed on the operating table with his head on the bronchoscopic head-rest and given 10 per cent carbon dioxide in oxygen to breathe through a tube. . . . As soon as hyperpnoea begins pentothal is injected. The average dose for an adult has been 8 c.cm.

of a 5 per cent solution injected during 30 seconds. Slower injection, particularly of a 2½ per cent solution, has been found unsatisfactory. Reduction in dose is made for age or poor general condition. The optimum dose is the smallest which will adequately relax the jaw muscles. When the mouth can be opened easily the injection is stopped and the glottis immediately exposed with a laryngoscope. During this preliminary laryngoscopy the anaesthetist continues to offer the carbon dioxide-oxygen mixture through Denis Browne's mouth-tube hooked into the corner of the mouth, thus maintaining stimulation of respiration. In nearly every case the larynx is found open and introduction of the bronchoscope is straightforward. In the few cases in which the larynx remains closed, on no account should any tentative movement of the bronchoscope be made; the bronchoscopist must wait until the cords open spontaneously—usually with a cough and without undue delay, if the technique has been carefully followed. After introduction of the bronchoscope oxygen is passed briskly through the side tube on the instrument, assisted by momentary positive pressure and by further carbon dioxide in the occasional case where spontaneous respiration is momentarily inadequate. A small additional dose of pentothal may be needed if the investigation takes long or the patient is resistant. At the end of the operation the bronchoscope is slowly pulled up until the end lies just distal to the larynx.

"The carbon dioxide mixture is then delivered again until definite hyperpnoea is evident, when the bronchoscope is carefully withdrawn. This manoeuvre will usually prevent a withdrawal spasm. Should some degree of spasm develop however, 10 per cent carbon dioxide in oxygen can be given through a mask and airway under