

group 1, the patients were awake on an average of 27 minutes after operation while in group 2 it was 45 minutes before they responded. A shorter period of recovery is of great advantage, of course, in rendering the patient more co-operative and also in allowing a more rapid return to normal of muscle tone and other physiological processes. However, one of the most striking differences in the two series is in the mortality rate. In group 2, it was 12 per cent. while in group 1, it was only 5 per cent. Whereas we realize that the other differences in the treatment of these two groups of patients are significant, we feel that the combination of intravenous anesthesia with spinal anesthesia is of paramount importance in producing these favourable results." 15 references.

J. C. M. C.

RUCKER, EDWIN: *Intravenous anesthesia in Obstetrics*. Virginia M. Monthly 70: 35-37 (Jan.) 1943.

"The short acting barbiturate, pentothal sodium, because of its ease of intravenous administration and the smooth and quick induction of anesthesia with rapid recovery, seems particularly applicable to obstetrics. . . . [We employed] a 2.5 per cent solution of pentothal sodium intravenously for anesthesia. . . . The maximum dose necessary was 1500 mg., the minimum 175 mg., and the average was 625 mg. During the first stage of labor, analgesia was obtained with a combination of morphine, hyoscine, sodium amylal, and rectal ether. . . . When the cervix was judged to be fully dilated, preparation was made for delivery; pentothal sodium was given intravenously. A perineal nerve block was performed with 1 per cent procaine, and as the head was delivered, the intravenous injection was discontinued. . . . In this series of 100 cases, there were no maternal deaths, nor any complication due

to the anesthetic. . . . Pentothal sodium has been very satisfactory in our hands and is a distinct adjunct to the obstetrician's method of relieving pain." 9 references.

J. C. M. C.

KENNEDY, J. A.: *A Technic and Device for Application of Ice Anesthesia for Amputation of Extremities*. U. S. Nav. M. Bull. 41: 226-230 (Jan.) 1943.

"The original methods of ice anesthesia advocated the use of rubber sheets to hold the ice. The writer and Dr. Jules D. Gordon of New York City, found that method faulty in many ways. . . . The technic used by the writer is as follows: Apply three ice caps to tourniquet area for 15 minutes and hold in place with a piece of muslin. Keep limb elevated during this period. A minute before this time is up apply an Esmarch rubber bandage firmly and slowly from above the area of inflammation to the tourniquet site. At the expiration of 15 minutes remove the ice caps and use the piece of muslin to protect the skin and then apply the tourniquet. Remove the rubber bandage. Then the limb is ready for the application of ice. The bottom of the ice container has previously been prepared with a layer of finely chopped ice on an incline distal to proximal. . . . The limb is placed in the ice container and covered with finely chopped ice to 2 inches above the tourniquet. The head of the bed is 'gated' up and the bed placed on small blocks at the head to facilitate drainage. . . . The limb is kept in the ice container for 2 hours, being examined at intervals and ice being added if needed. After 2 hours the patient is taken to the operating room. The limb is removed from the ice, dried off, and is ready for amputation. The operating crew should be ready to go into action as soon as the patient is

placed on the table. Preoperative sedation is prescribed by the surgeon."

J. C. M. C.

HINGSON, R. A., AND EDWARDS, W. B.: *Continuous Caudal Analgesia in Obstetrics*. J. A. M. A. 121: 225-229 (Jan. 23) 1943.

"Continuous caudal analgesia was developed to relieve the pains of labor and delivery. Since its beginning we have sought to improve our apparatus and refine our technic in order to provide the maximum of comfort for the mother with a minimum of risk for her and the baby. . . . In a previous paper, we wrote that we used this procedure in obstetrics only after it had been thoroughly studied in the management of twenty surgical operations on the perineum and lower extremities. We first used it in our surgical service, working with Southworth, in October 1941 for a bilateral phlebectomy. Since that time we have managed the entire course of six hundred labors and deliveries with this method without resorting to any other form of anesthesia. . . . In the series of 100 cases of delivery handled by continuous caudal analgesia, the percentages were as follows in the U. S. Marine Hospital, Stapleton, N. Y.: primiparas 89 per cent, multiparas 11 per cent, cephalic 98 per cent, anterior 84 per cent, posterior 14 per cent, breech 2 per cent. In this series there were only 3 per cent unsatisfactory cases in which supplementary anesthesia was necessary. Since Jan. 1, 1942 we have either managed or supervised the labor and delivery of 489 additional cases in the clinics of nineteen medical schools and teaching hospitals. In this group there were eleven breech deliveries, one set of twins and one cesarean section. Of this series 11 per cent obtained unsatisfactory analgesia, necessitating either discontinuance of the method or the addition of supplementary anes-

thesia. In many of these cases the technic was being practiced by residents who were learning the procedure. In the entire series of 589 cases there were 586 live births with no maternal complications or deaths. The average length of time the analgesia was continued was six and one-half hours. The shortest was thirty-five minutes and the longest was thirty-three hours. The average metycaine dosage was 2.6 Gm. The maximum dosage given was 11 Gm.

"In cases of toxic hypertension it was noted that after the analgesia had been in effect for about forty-five minutes the pressure reached a plateau which corresponded to their normal before they became toxic. This drop persisted until after delivery and in the cases observed did not return to the toxic peak. All the patients stated that they felt much better. . . . This method involves a new analgesic technic which should be studied under those who have been trained in the method before it is employed in practice. Obviously, the method depends also for its success on a high degree of obstetric competence, avoiding cases in which there are contraindications, avoiding meddlesome or hasty obstetric intervention and observing well established criteria for observation of the progress of the delivery." 13 references.

J. C. M. C.

GREADY, T. G., JR., AND HESSELTINE, H. C.: *Continuous Caudal Anesthesia in Obstetrics: Preliminary Report*. J. A. M. A. 121: 229-230 (Jan. 23) 1943.

"Continuous caudal anesthesia has a place in obstetrics. There are some dangers and contraindications to this method. Cautious but repeated experiences with the method are desirable to evaluate it. These preliminary observations with some of the advantages and disadvantages are presented in the