

of other anaesthetists using the new purified form of curare (Squibb-Intocostrin) as an adjunct to anaesthesia stimulated us to venture into this new technique. . . . From March 1945 to January 1947 this anaesthetic combination was personally administered to over 400 consecutive cases undergoing major abdominal procedures with apparently great success. Of the 400 patients, 33 were considered to be excellent operative risks, 189 fairly good, 162 only fair, 18 poor and 1 bad. The surgeons were particularly pleased with the results. . . . It would appear that both types of anaesthesia, continuous spinal and cyclopropane with curare, are suitable for major abdominal surgery. Both can be made to provide satisfactory abdominal muscle relaxation for long periods of time. Continuous spinal anaesthesia requires special apparatus and about twice as much time to prepare the patient for the surgeon. Under the spinal also, the patient's general condition did not seem to be quite as satisfactory as under the general anaesthetic. . . . The chief advantages of the cyclopropane curare method are the ease of administration, the profound relaxation without evidence of shock and rapid recovery." 8 references.

J. C. M. C.

ANDROS, G. J.; DIECKMANN, W. J.; OUDA, P.; PRIDDLE, H. D.; SMITTER, R. C., AND BRAYAN, W. M., JR.: *Spinal (Saddle Block) Anesthesia in Obstetrics*. Am. J. Obst. & Gynec. **55**: 806-820 (May) 1948.

"Analgesia and anesthesia are important medical treatments to anyone who is in pain. . . . The doctor must always remember that any interference with the normal course of labor—hypnotics, oxytocics, anesthetics—increases the hazards for mother and baby. . . . This is a study of 719 cases of modified saddle block anesthesia car-

ried out at the Chicago Lying-in Hospital between January 5, 1947, and April 24, 1947. These cases represent 58 per cent of all patients delivered during this period. . . . The technique of anesthesia was demonstrated to us by Parmley, and was used throughout the study with minor modifications only in so far as drugs other than Nupercaine were involved. The majority of the injections were carried out with the patient in her labor bed, under the mattress of which had been inserted board supports to prevent sagging. The patient was placed in a sitting position over the side of the bed, bending forward and supported by an assistant. . . . Spinal puncture was made at the level of the fourth lumbar interspace. In case of difficulty at this point the third space was utilized. A short-beveled 22-gauge needle three inches in length was used in the majority of cases. When a free flow of clear spinal fluid was obtained, a Luer Lok syringe containing the properly prepared solution . . . was attached to the spinal needle, aspiration of 0.1 c.c. spinal fluid carried out, and the solution injected rapidly. At the end of ten seconds the needle was removed, and at the end of thirty seconds the patient was placed flat on her back with a pillow under the head to keep the neck sharply flexed. The procedure was timed to be carried out in its entirety between contractions of the uterus, to prevent any abnormally high level or aberration of anesthesia which might result from spinal fluid turbulence coincident with contraction. . . . All but seven of the anesthetics were completed with four drugs: . . . Buffered nupercaine (formerly percaine) in 1:200 solution, the drug used by Parmley and Adriani, was administered to 404 patients in dosage of 2.5 mg. Premixed unbuffered nupercaine (2.5 mg./c.c. in five per cent glucose) was tried in 109 instances. These two

gave statistically similar results . . . in our hands, and have been grouped together as Drug 1 in our analyses.

"Pontocaine (tetracaine) hydrochloride (Drug 2) was used in 115 cases. The dose was arbitrarily selected as 5 milligrams. By employing the 1 per cent solution of the drug, it was possible to create a technique for preparation with 10 per cent glucose which was identical to that for 1:2000 nupercaine. This was deemed of importance by us in setting up a routine which should prevent accidental improper dosage. . . . Novocain (procaine hydrochloride) (Drug 3) and Metycaine (Drug 4) were selected as shorter-acting agents to be tested under the saddle block technique. . . . Seven additional cases received monocaine formate. . . . The rate of operative interference in delivery was not significantly increased. Complications attributable to the anesthetic procedure have been a problem. The benefits to the fetus in early spontaneous respiration have been striking. There has been no increase in the fetal or maternal morbidity of mortality." 8 references.

J. C. M. C.

HERRICK, F. L.: *Pentothal Sodium Anesthesia for Cesarean Sections*. Am. J. Obst. & Gynec. **55**: 883-886 (May) 1948.

"At Grace Unit of Grace-New Haven Community Hospital, from 1942 to 1946, there were 492 cesarean sections performed using pentothal as the sole anesthetic agent until after delivery. In practically all of these cases, it was the main anesthetic agent throughout the operation, supplemented with a mixture of equal quantities of oxygen and nitrous oxide after delivery of the child. . . . There were no maternal deaths. The incidence of nausea and vomiting was small. The 2.7 per cent atelectasis may at first thought seem

high, but when it is considered that many of these operations were done as emergencies, it takes on a much less serious aspect. There were 15 fetal deaths, only 5 of which may have been due in any respect to the anesthesia." 2 references.

J. C. M. C.

TURVILLE, C. S., AND DRIPPS, R. D.: *The Anesthetic Management of the Aged*. Pennsylvania M. J. **51**: 434-436 (Jan.) 1948.

"Since 1941 we have administered 1064 anesthetics, at the Hospital of the University of Pennsylvania, to a total of 974 individuals above the age of 70. The over-all hospital mortality for this group was 4.0 per cent, a surprisingly good survival rate which almost tells the whole story. The aged patient is apparently a better surgical risk than one might assume on casual thought. All types of operations were performed in this series. . . . Spinal anesthesia with procaine, pontocaine, metycaine, or nupercaine was administered 448 times. Two hundred and six pentothal anesthetics were given. Cyclopropane was used on 193 occasions and ether 66 times. Regional block was administered to 150 patients. Avertin, nitrous oxide, and refrigeration anesthesia were also used. . . . Since the majority of elderly individuals are well composed and philosophical, as a rule opiates and sedatives are omitted and only atropine in doses of 0.4 mg. (gr. 1/150) is administered prior to anesthesia. . . . The aged patient usually has a high pain threshold. This makes him often ideal for regional anesthesia and many major procedures were carried out successfully in this fashion. Lest regional block be adopted too widely, however, it must be recognized that reactions to local anesthetic agents are more common in the aged, that tissue irritation from the drug may interfere with tissue repair, and that sup-