gional and infiltration anesthesia, let me briefly cite the statistics of the operative and spontaneous deliveries done at the Chicago Maternity Center with this method of anesthesia. Here, as you are aware, all deliveries are done in the home under the poorest of physical and sanitary environments. . . . Up to the present time, from the inception of the institution in 1932, parasacral anesthesia has been utilized in 550 cases, and pudendal block in 2,200 cases, with no maternal or fetal deaths attributable to the anesthetic. There were two cases of abscess formation at the site of puncture. No needle was broken off in the tissues. . . . In the 550 cases where parasacral anesthesia was employed, 314 (57 per cent) were ideal; 203 (37 per cent) were satisfactory; and only 33 (6 per cent) were failures. In the pudendal block group, 880 cases (40 per cent) were ideal; 1,210 (55 per cent) were satisfactory; and 110 (5 per cent) were failures. In the parasacral series, all forms of pelvic obstetric surgery were performed with the exception of version. This includes manual and instrumental rotations and difficult midforceps operations. In those cases in which the pudendal block anesthesia was used, the operations were mainly low forceps deliveries, episiotomies and repairs. This was also the procedure in all breech deliveries. . . . Inasmuch as local anesthesia has proved so satisfactory in home obstetrics, it certainly can and should be employed more often in hospital practice, particularly in this day and age, where the anesthetic departments in most hospitals have been so badly depleted."

J. C. M. C.

EGAN, R. L.: *Refrigeration Treatment of Peripheral Vascular Diseases.* Nebraska M. J. **29**: 217–218 (July) 1944.

"Refrigeration combined with measures to combat spasm of collateral arterial circulation may safeguard against or minimize gangrene resulting from arterial occlusion. It is a valuable agent in the preparation of the poor risk patient with vascular disease for lifesaving surgery and when used as an anesthetic procedure has valuable advantages over conventional methods." 10 references.

J. C. M. C.

ELLIS, G. J., AND SHEFFERY, J. E.: *Further Observations on Continuous Caudal Anesthesia.* M. Ann. District of Columbia **13**: 258–262 (July) 1944.

"Since our original article on 100 obstetrical cases delivered under continuous caudal anesthesia, we have used this method in an additional 125 cases. . . . There has been no mortality or morbidity in our series of 225 cases attributable to the anesthetic. . . . Strict adherence to technic, early recognition of complications, and the facilities for prompt treatment will keep accidents at a minimum." 8 references.

J. C. M. C.

FITZGERALD, J. E.; THOMSON, J. M., AND BROWN, H. O.: *Continuous Caudal Anesthesia with Pontocaine: Obstetrician's Viewpoint.* Am. J. Obst. & Gynec. **48**: 94–99 (July) 1944.

"The following report is a preliminary presentation based on the first 200 cases in which repeated caudal injections of pontocaine were used to produce and maintain anesthesia during labor, and covers the five-month period between March 16 and August 26, 1943 [Cook County Hospital]. . . . There were only 3 definite failures due to inability to locate the caudal canal. In 10 patients there was initially complete relief, but later the needle became dislodged (5 cases) and was not

or could not (1 case) be reinserted, or the needle was removed too soon, or the tubing became disconnected, or the catheter became plugged, resulting in return of pain, all 10 being classified as 'technical interruptions' of the method. Six patients had incomplete relief in two of whom anesthesia was unilateral only. In 9 other cases of incomplete anesthesia, the deficiency was remedied by technical corrections such as addition of the vasoconstrictor suprarenin (2 cases) where it had been omitted, increase in the concentration of pontocaine (4 cases), and reinsertion of the needle (5 cases). In 1 case the subarachnoid space was entered; in another this was suspected. No complications resulted. . . . Surgical removal of broken caudal needles was necessary in two cases. . . . Mild blood pressure fall was recorded in 34 cases, but in only six of these was the fall greater than 30 points systolic. . . . Five patients complained of pounding headache during the injection. One complained of momentary chest pain, one of palpitation and one had nausea and emesis after the first injection. Four had chilly sensations. In three patients severe chills were present after injection, one lasting fifty minutes. Three others developed chills with fever. In one the temperatures went to 104° F., and she was disoriented for three hours. In two patients relaxation was so marked that the cervix protruded externally after delivery. Two patients had severe post-partum hemorrhage. There were 13 cases of mild endometritis, 3 of pyelitis and 5 that required catheterization post partum, which is no more than in cases without caudal anesthesia. Motor loss was present to some degree in 154 cases and in 60 of these it was marked. In most cases the onset of motor paresis was delayed for some time after the first injection. One patient had fecal incontinence for three days. One patient developed anal sphincter relaxation, bladder paralysis, and a bilateral foot drop. This patient was a luetic who had received four neosalvarsan injections (2 neo of 0.3 with 0.13 bismuth and 2 neo of 0.6 with 0.13 bismuth) during pregnancy and from whose hair arsenic was recovered post partum. Nevertheless, the paralysis developed during labor. The rectal sphincter gradually regained its tone over a period of ten days but the foot drop improved very slowly and even after nine weeks muscular control is still imperfect. In our experience labor was not shortened . . .

"Pontocaine-suprarenin-saline solution has proved a safe agent for this method providing 3 to 5 hours of relief from the first dose, and 1 or more hours of relief from subsequent injections. . . . We find that cervical dilatation is not accelerated in this series. The incidence of operative deliveries is increased. . . . One hundred seventy-one of 200 cases were completely satisfactory. . . . There was no maternal mortality. Fetal mortality was 3.0 per cent." 3 references.

J. C. M. C.

MALPAS, PERCY: *The Pattern of the Contractions of the Pregnant Uterus under Spinal Anaesthesia and the Attendant Changes in the Reactivity of the Myometrium.* J. Obst. & Gynaec. Brit. Emp. 51: 112–120 (Apr.) 1944.

"Spinal anaesthesia has two readily demonstrable effects on the pregnant uterus: it releases contractions and it heightens the reactivity of the myometrium to various stimuli. In virtue of these effects spinal anaesthesia provides a method by which certain aspects of the physiology of the pregnant uterus can be studied, notably the pattern of the uterine contractions and the factors which maintain uterine qui-