

paper to a consideration of the agents and technics suitable for the relief of pain and for relaxation at actual delivery. . . . Safe anesthesia for the parturient woman must be also safe for the fetus. . . . There are five anesthetic technics from which a choice can be made. These technics are inhalation, intravenous, regional and local, spinal, and rectal. The selection of agent and technic will necessarily be determined by the whereabouts of the patient, the proficiency of the available anesthetist, and the agents at hand. . . . Inhalation anesthesia has the advantages of ease of administration, flexibility of level of depression, adaptability to numerous agents with different properties, rapid elimination, unlimited action, and cooperation of the patient can be retained or abolished depending on the level of the anesthesia. The principal disadvantage of the inhalation technic is the fact that the drugs used with it enter the maternal blood stream and ultimately that of the baby. Depression of the fetus is in direct proportion to the concentration in the mother and the length of the anesthesia. . . . Anesthesia induced by the administration of barbiturates intravenously is pleasant for the patient, rapid in onset, and non-explosive. It is not easy to administer properly, however, because two individuals are usually required, one to administer the drug and one to control the airway. Of the two, the latter is more important. The level of anesthesia is not readily controlled, it is adaptable to only a few agents, and the elimination of the drug used is dependent on the ability of the liver to detoxify it and the kidney to excrete it. The drug is present in the maternal blood stream and consequently capable of causing fetal depression. Cooperation of the mother is not possible.

"Local infiltration of the perineum or pudendal nerve block will provide perineal anesthesia and relaxation.

Unless there is sufficient absorption of the agent to cause a reaction in the mother, there is no interference with the baby by this technic. . . . Single injection caudal anesthesia will also give perineal anesthesia and relaxation and may also give some relief from contraction pain. . . . The disadvantages of continuous caudal anesthesia seem, on the basis of experience and reports in the literature, to be associated with the attempts on the part of the enthusiasts to extend the use of this technic beyond the limits of rationality. . . . Spinal anesthesia is easily administered, causes minimal interference with the baby, gives complete perineal and labor pain relief, and does not depress uterine contraction except in unnecessarily high levels. It has the disadvantage of being limited in length of action and must be administered at the proper time to effect pain relief for the delivery of the baby. . . . The rectal technic is chiefly advantageous for amnesia and analgesia in the early stages of labor and rarely is satisfactory for anesthesia for the delivery without complementation with some other technic. . . . In anesthesia, as in obstetrics, the best results will be obtained by the best trained individual and by his ability to adapt these tools to any particular situation. A good forceps and a strong pair of arms do not make a good obstetrician, and a good gas machine and a potent gas do not make a good anesthetist." 3 references.

J. C. M. C.

FRAZIER, JAMES: *Continuous Caudal Analgesia in Obstetrics; A Review of the Literature*. Kentucky M. J. 42: 345-348 (Nov.) 1944.

"Continuous caudal analgesia is a very great forward step in the problem of obstetric analgesia, being relatively simple to use, offering complete relief from pain in labor, being harm-

less and non-depressant to the baby, and being a new method of treatment of the dreaded eclampsia of pregnancy. One of the principal objections to its usage is the fact that the obstetrician has to be near the patient the entire time of labor, and this is not possible at all in these wartimes, even if it were in peace times. Undoubtedly the method will be worked out so that the physician will not have to remain with the patient continuously and this method of obstetric analgesia will assume its place in the obstetric analgesic procedures used in hospitals."

J. C. M. C.

EBNER, P. G.: *Use of Continuous Spinal Anaesthesia for Analgesia in Labor and during Delivery: A Preliminary Report.* J. South Carolina M. A. 40: 224-227 (Nov.) 1944.

"It was necessity that prompted the author to investigate the potentialities of continuous spinal for obstetrical analgesia in labor and during delivery. For the author, being unable to obtain training in the technique of continuous caudal analgesia, yet still wishing to make the method available to obstetrical patients under his care, avidly studied the literature on continuous caudal analgesia, and then proceeded cautiously to employ it on a series of five cases, with but partial success in one, and complete failure in the other four. Discouraged by these failures . . . the author mused on the potentialities of continuous spinal anaesthesia. . . . Accordingly, on January 12, 1944, continuous spinal analgesia was started on a primigravid patient during the last part of the first stage of labor. . . . Subsequent to this case and up to the present some fifteen patients have had the benefits of continuous spinal analgesia started at the latter part of first stage of labor. . . . The shortest period of time any of the fifteen patients were under the influence of continuous

spinal analgesia was 1 hour—the first case, while the longest period of time of administration was 3 hours and 30 minutes in the case of an ROP diagnosed as such with cervix dilated to 4 cms. prior to instigating the analgesia. The average length of time for all cases was 2½ hours. The principle of using this form of analgesia only in the late first stage—when pains are at least 5 minutes apart and cervix 4-5 cms. dilated in primiparas with head engaged—or when the termination of labor in the opinion of the operator is not more than 4 hours distant—was decided upon by the author as a precautionary measure in that these early cases represent an introductory period of experimentation. . . . The largest amount of procain-HCl given in any one case was 300 mgms. over a period of 2 hours and 45 minutes in the case of an ROP, while the smallest amount was 125 mgms. over a period of 2 hours and 12 minutes. The incidence of episiotomies was no greater nor less than has been our experience with inhalation anaesthesia. There were no still-births, neo-natal deaths, nor maternal deaths. The series is too small to decide whether this type of analgesia shortens labor, but in any event the author feels that labor was not prolonged. . . . Since this paper was written, twenty additional patients have been delivered by the same technique." 9 references.

J. C. M. C.

MCGOOGAN, L. S.: *Local Anesthesia in Caesarean Section.* Nebraska M. J. 29: 377-378 (Dec.) 1944.

"The operation of Caesarean section to be successful requires an operating team of anesthetist, surgeon, scrub nurses, floor nurses and a physician to care for the baby. In many instances in the smaller rural hospitals a competent anesthetist cannot be obtained, sufficient nursing help is unavailable,