

longed anoxemia and shock in these cases account for a high mortality. . . . One of the early signs of fetal distress is a pronounced slowing of the fetal heart rate and convulsive activity of the baby during labor and should be recognized as an indication of anoxemia. If the heart rate should be increased beyond normal, subsequent severe asphyxia may be anticipated. Under such circumstances, inhalations of oxygen by the mother during the last several minutes of delivery and as long afterward as the cord pulsates will permit more oxygen and blood to reach the fetal circulation. Gentleness of manipulation and maintenance of body heat are two general principles of paramount importance in any resuscitation procedure followed from here on. . . . An outline of the immediate treatment of asphyxia neonatorum includes (1) gentleness in handling, (2) warmth, (3) aspiration of mucus, (4) oxygen inhalations, (5) artificial respirations by mechanical devices, (6) carbon dioxide at intervals and (7) drugs which stimulate the respiratory center."

J. C. M. C.

MINNITT, R. J.: *The History and Progress of Gas and Air Analgesia for Midwifery*. Proc. Roy. Soc. Med. 37: 45-48 (Dec.) 1943.

"The fact that I had often noticed that although a patient undergoing teeth extraction with gas struggled violently, yet later had no recollection of the actual operation, encouraged the intention to try out the drug in midwifery, and early in 1933 I remember the late Dr. Howard Jones saying that he thought it could be administered on the injector principle. . . . On July 19, 1933, Mr. A. Charles King and I considered the adaptation of a McKesson oxygen therapy apparatus for the purpose, and during the next two months I collaborated with him in the

construction of an intermittent flow apparatus for administering gas and air inhalations. . . . In order to enhance the value of analgesia, and for acquiring a transitory anaesthesia in suitable cases, other anaesthetic drugs can be combined with gas and air."

J. C. M. C.

LYONS, HAROLD, AND HANSEN, F. M., JR.: *Continuous Caudal Anesthesia in 200 Obstetric Patients*. Am. J. Obst. & Gynec. 47: 105-110 (Jan.) 1944.

"Our study is based on a series of 200 consecutive obstetric patients in whom continuous caudal anesthesia was employed routinely in order to determine its practicability. In 5 instances, the anesthesia was unsatisfactory and inhalation anesthesia was used in the second stage. In 195, or 97.5 per cent of our cases, the method was successful. . . . A distinct advantage in this study was the fact that caudal anesthesia had been employed on our service during the second and third stages of labor in over 500 deliveries previous to the adoption of the continuous method, and we feel that a thorough fundamental training of the operator is necessary for its success. . . . Metycaine was used in all instances. . . . The equipment employed in this series was similar to that described by Edwards and Hingson. . . . The malleable stainless steel needle . . . is held in place with 1/4-inch strips of adhesive tape. . . . When the cervix is completely dilated and the head is on the perineum, or when, in the judgment of the obstetrician in charge, the patient can be delivered within one hour without unwarranted interference, the caudal needle is removed and the patient then taken to the delivery room. . . . No obstetric complications which could be considered as contraindicating the usage of this procedure were encountered by us. The most important com-

plications to look out for are the intravenous or subarachnoid injection of the drug, infection, breaking of the needle, fall in blood pressure, toxic manifestations, and trauma to the sacrum. An increase in the number of operative deliveries was observed." 12 references.

J. C. M. C.

RANDALL, L. M.: *Continuous Caudal Anesthesia in Obstetrics*. *Journal-Lancet* 64: 7-11 (Jan.) 1944.

"Members of the Section on Anesthesia of the Mayo Clinic previously have published the technic of effecting continuous caudal anesthesia in obstetrics by injection of 1.5 per cent solution of metycaine. My colleagues of the Section on Obstetrics of the same institution wish me to report on our experience with this procedure from the standpoint of the first eighty-three patients in whose cases this method of anesthesia was employed. This number represents about 10 per cent of all patients delivered at the Clinic since the first patient was given caudal anesthesia on June 3, 1942. The solution was injected through a needle fixed in the caudal canal in nineteen cases and through an indwelling catheter in sixty-four cases. . . . In thirty-nine cases (47 per cent), continuous caudal injection of 1.5 per cent solution of metycaine, without any other measure of anesthesia, can be judged to have been 100 per cent successful, as far as analgesia and anesthesia were concerned. . . . In twenty-four cases (29 per cent), continuous caudal anesthesia provided excellent analgesia and anesthesia until it was discontinued for various reasons. Before these cases are considered in numerically separate groups, which will total to twenty-four, it may be said that in eleven the effect of continuous caudal anesthesia was continued into the second stage of labor for from one to two hours. . . .

Of the total of twenty-four cases in which continuous caudal anesthesia was stopped for various reasons, failure of progress in the second stage of labor occurred in ten. In all these ten cases occipital posterior position occurred. In five of the ten cases rotation was effected manually, in one, by means of forceps, and in four it was spontaneous. In nine of the twenty-four cases continuous caudal anesthesia was discontinued at the onset of the second stage of labor or very early therein. In two of these nine cases the discontinuance was because the catheter slipped and it was decided to carry on analgesia and anesthesia by inhalation rather than to reinsert the catheter.

"In one of the nine cases, the vertex was asynclitic and descent and rotation were arrested below the level of the spines of the ischium. Continuous caudal anesthesia was discontinued by election in three of the nine cases. In two instances of the nine, in which occipital posterior position was recognized early in the second stage of labor, continuous caudal anesthesia was discontinued because the patients had no desire to bear down; when nitrous oxide and oxygen were administered to them for analgesia, and the effect of the caudal injection had disappeared, they cooperated well. In the last case of the nine yet to be considered, the same situation that has been described in the previous sentence obtained in the presence of a breech presentation. In four cases of the twenty-four continuous caudal anesthesia was discontinued in the first stage of labor. In two of these cases the patients were primigravidas, dilatation of whose cervixes remained at 8 to 9 cm. for five hours. Cessation of continuous caudal anesthesia was succeeded by completion of the first stage of labor and analgesia and anesthesia were effected by inhalation in the second stage, for delivery and repair. . . . One patient who was admitted in an emergency condition after