

Subsequently, the child was taken to Duke Hospital. Hyperpnea and marked hypertrophy of the tonsils and adenoids, stenosis of the right naris, posteriorly, and lack of normal rise in the blood-sugar curve were noted. . . . September 3, 1938, at 5 years and 2 months of age, tonsillectomy and adenoidectomy were performed. He reacted normally to the operation. The morning following the operation the child was in a profound coma and slightly cyanotic. Breathing was fast and labored, and the pulse faint and rapid. Twenty cc. of 5 per cent dextrose solution was given in the external jugular vein. Blood-sugar determination in the laboratory before administration of the dextrose was reported as 30 mg. per 100 cc. A few hours later the pulse was imperceptible and the child looked moribund. Twenty cc. of 50 per cent glucose was given in an arm vein, followed by 100 cc. of 5 per cent dextrose in Ringer's solution. The general appearance of the child and the pulse improved rapidly. Towards evening, his pulse was full and strong; he was able to take food. Monday, September 5, he seemed well. Tuesday, September 6, the child was taken home in apparently good condition. A few hours later he became cyanotic, dyspneic, and comatose. Twenty cc. of 50 per cent glucose was administered intravenously and 5 cc. of calcium gluconate intramuscularly. He regained consciousness slowly. The temperature was 103.7. Generalized twitchings or athetoid movements of the upper extremity were noticed. A blood-sugar, taken at 11 a.m., before administration of glucose, showed 133.3 mg. per 100 cc. Blood-sugar at 5 p.m. was 133.3 mg. per 100 cc. The child progressively improved. Sunday, September 11, he appeared to be normal. . . . April, 1939, when he was 5 years and 10 months, he had a typical grand mal convulsion. Since then, he has been

suffering marked mental deterioration.

... "Case 3, J. G. C. . . . was first examined July 15, 1939, when he was 2 years of age. . . . Examination did not reveal anything abnormal. . . . July 27, 1940, at 3 years of age, laparotomy was performed for a ruptured appendix. The appendix was removed, drains were inserted, and the abdomen closed in the usual manner. After the last skin suture had been put in, the child had typical epileptiform seizures, which terminated fatally. The convulsions in the last case may not have been due to anesthesia. It is possible that they were due to embolus, yet, because of the possibility of their having been due to anesthesia, the report of this case seems justified." 2 references.

J. C. M. C.

HANLEY, B. J.: *Obstetrical Analgesia in Private Patients*. Am. J. Surg. n.s. 54: 403-406 (Nov.) 1941.

"It is pretty generally agreed that the amelioration of pain during labor is desirable although the ideal analgesia is yet to be evolved. . . . Common usage interprets the word analgesia to mean both a lessening of pain and loss of memory. This, of course, is not strictly correct, but will be used in this sense in this paper. . . . A series of 312 private cases of labor are reported in which nembutal and scopolamine were used to induce analgesia. Good results were obtained in 82 per cent. Most of the patients failing to respond were in hard labor before analgesia was started and hence the drugs had insufficient time to induce sleep. There were no severe maternal complications in this series. Ten patients were markedly restless and difficult to control. One baby, 0.32 per cent, was stillborn due to a prolapsed cord which was in no way related to analgesia. Six babies were deeply asphyxiated at birth and

required the use of a tracheal catheter for resuscitation. Six other babies who showed evidence of asphyxia responded to carbogen inhalations. . . .

"The combination of nembutal and scopolamine, . . . can be used with safety to induce analgesia in labor. Patients with this type of analgesia require constant supervision. The length of the first stage of labor is not increased, the length of the second stage of labor may be increased due to lack of cooperation with the expulsive powers, hence more outlet forceps are necessary." 3 references.

J. C. M. C.

POTTER, ROBERT; LIVINGSTONE, HUBERTA; ANDREWS, EDMUND, AND LIGHT, GERALDINE: *Blood Ether Levels in Surgical Anesthesia*. Surgery 10: 757-765 (Nov.) 1941.

"Since the first use of ether as a human anesthetic agent by Long in 1842, many determinations have been made in animals and a few in man to ascertain anesthetic and lethal levels. The problem has been approached mainly in two ways: (1) by measuring the ether vapor concentration in air, either as administered for anesthesia or as the alveolar tension when exhaled, and (2) by measuring the ether concentration in blood samples taken during anesthesia. . . . The criteria for 'surgical anesthesia' varied with the different workers. Muscular relaxation, loss of pain response, alteration of corneal or deep reflexes, character of respiration, etc., were considered among the criteria. . . . There is apparent disagreement among the various workers as to the effect of morphine or morphine-scopolamine or other premedicant drugs on the blood ether levels required for surgical anesthesia. . . . It is the general belief among many surgeons and anesthesiologists that the preoperative administration of morphine alone or in combination with atropine

or hyoscine materially reduces the amount of ether required to produce surgical anesthesia and shortens the induction time, in addition to quieting the unrest of the patient in anticipation of the operation and providing some analgesia immediately postoperatively. It is probable that this concept has developed from clinical observation and does not represent controlled investigation. In this study we have attempted to evaluate the effect of morphine alone, or in combination with hyoscine or atropine on ether levels in surgical anesthesia. With a simple, rapid method for determining blood ether concentration at our disposal, determinations were made on patients using various methods of administration of ether anesthesia both with and without premedication. Special emphasis was placed on bringing the patients to the same level of anesthesia as determined by the clinical signs described by Guedel. The various groups were compared in an attempt to evaluate the effect of premedication on the concentration of ether in the blood. . . .

"Consecutive patients receiving ether anesthesia were used in this study. They included neurosurgical, upper and lower abdominal, plastic and tonsil cases. The ages varied from 5 to 70 years. Premedication consisted of morphine alone, morphine-atropine, or morphine-hyoscine, and codeine in the case of young children. These drugs were administered in the usual clinical doses of 0.010 to 0.015 Gm. of morphine, and 0.0003 to 0.0004 Gm. of atropine or hyoscine. Codeine ranged from 0.02 to 0.03 Gm. In every case the premedication was administered twenty to forty-five minutes before the induction of the anesthetic. A small series received avartin as basal anesthetic, and some patients received no premedication. Four different anesthetic methods were employed: (1)