

oxide-oxygen is still the most suitable one for the type of surgery involved.

... "To be satisfactory any alternative inhalation method must permit the mouth or pharynx being efficiently packed. . . . Nasopharyngeal inhalation of gas-and-oxygen has probably been used at some time or other by most anaesthetists. . . . A technic has . . . been evolved in which two tubes of as large a bore as possible are passed, one through each nostril. The ends of these tubes lie just beyond the epiglottis and opposite the glottis. The tubes are then connected to a McKesson machine, and the pharynx or mouth is packed with gauze. A state of affairs is obtained which has the advantages of the endotracheal method without most of its disadvantages. The only causes of obstruction of the respiration, if the tubes are the correct length, are spasm of the glottis—a condition rarely seen with nitrous-oxide-oxygen anaesthesia—and depression of the jaw by the surgeon, which can usually be countered by the anaesthetist. . . . By experiment and checking with laryngoscopic examination two average lengths [of tubes] were determined: for men, 6½ inches; for women, 5¾ inches. The tubing is that used for endotracheal work by Magill (the thin-walled variety) cut with a short bevel (45 degrees). The anaesthetist should be prepared to cut tubes for any individual patient. . . .

"Anaesthesia is induced with nitrous oxide, and when the patient is in deep third-stage anaesthesia the face-piece is quickly lifted and one of the tubes of large diameter (8–10 Magill tube) is passed through whichever is the larger nostril. The tube should be inserted at right angles to the face and the point kept in contact with the floor and septal wall of the nasal fossa. The face-piece is replaced and the patient re-anaesthetized. The second tube is

then inserted in like manner. As a rule the two sides of the nose differ in size, and a smaller tube will be used for the other side. . . . The patient is now stabilized with oxygen, the pressure of the gases being increased, if necessary, to 10 to 15 mm. Hg. to overcome air leakage through the mouth while the pack is inserted. As a rule the mouth can be easily opened at this stage, and the pharynx or mouth packed. . . . As a rough guide the anaesthetist should pack in exactly the same way as for an endotracheal tube, but not quite so far back towards the glottis. . . .

"Altogether 230 patients have been anaesthetized in this manner, the majority at the Royal Dental Hospital, for a variety of dental operations. . . . From the surgeon's point of view they were all satisfactory, and in about half the cases he was not aware until after the operation that an endotracheal tube had not been used. Postoperative symptoms which could conceivably be due to the tubes were absent, except in two cases. . . . The method described above has its limitations. . . . It should not be used in patients in whom obstruction due to depression of the mandible is difficult to overcome or in young children." 6 references.

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TOLLEFSON, D. G.: *Analgesia and Anaesthesia in Labor*. West. J. Surg. 49: 44–55 (Jan.) 1941.

"In the first six years of my practice, obstetrical analgesia presented no problem. The writer was satisfied with the use of nitrous oxide analgesia and small doses of morphine. However, the constant publicity concerning 'painless childbirth' in the lay press, and the use of the barbiturates by colleagues with apparent satisfaction from the patient's standpoint, reduced my resistance to the more complete analgesic technic. It was obvious that patients

were not choosing their physician on the basis of his ability as an obstetrician, but rather, on his success in rendering them entirely oblivious to their surroundings—they were demanding complete relief of pain. This had become an economic factor which had to be reckoned with, and therefore, since 1934, I have tried the more complete analgesic methods, the results of which form the basis of this presentation. . . .

"A series of 500 patients in which complete analgesia was attempted by using pentobarbital sodium and scopolamine has been analyzed. A complete or successful analgesia was obtained in 68.8 per cent, some relief or a fair result in 19.6 per cent, and failure in 11.8 per cent. Excitement occurred in 10 per cent. Seventy-seven per cent of the infants breathed spontaneously, and 5.4 per cent were alarmingly asphyxiated. Three stillbirths and 8 fetal deaths occurred. There was no maternal mortality. The first stage of labor was shortened. The blood loss was not increased. The results correspond quite closely to those reported by Irving, Berman and Nelson, and from their analysis it appears that this method of analgesia is an improvement over the use of opiates and scopolamine. . . . While this method of analgesia has a place in the practice of obstetrics, it does not settle the problem. Might it not be better if the pendulum of professional thought, as well as public opinion, would swing backward to a less complete analgesic technic?" 5 references.

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TUOHY, E. B.: *Clinical Use of Intravenous Anesthesia Alone and in Combination with Other Anesthetics: A Method of Anesthesia Eliminating the Hazards of Fire and Explosion*. South. M. J. 34: 42-47 (Jan.) 1941.

"The broadest application of intravenous anesthesia, and, unless other-

wise specified, 'pentothal' sodium is the agent usually employed, is found in those surgical cases in which a relatively short operating time interval is required and in which marked muscular relaxation is not essential. . . . From our experience my colleagues and I feel that intravenous anesthesia is not indicated for very young children or for persons with markedly diminished pulmonary and cardiac reserve. To enlarge on the flexible nature of the method, one may employ intravenous anesthesia preliminary to the induction of general anesthesia, eliminating the psychic trauma to which some patients seriously object, or it is singularly effective for the execution of certain painful regional anesthetic procedures such as bunion block or abdominal wall block. When spinal anesthesia is employed, the intravenous method may serve two purposes: first, to eliminate or control nausea and retching, especially for operations on the upper part of the abdomen, and secondly, to supplement a spinal anesthetic that is wearing off or one that has not been entirely satisfactory in producing adequate anesthesia. It should be emphasized here that, if intravenous anesthesia is used in combination with spinal anesthesia, the agent should be administered very slowly in 2.5 per cent concentration, and particular attention should be directed to the patient's respiration and blood pressure. One must avoid too marked a slowing or depression in respiratory rhythm. A wise and careful practice to follow when using spinal and intravenous anesthesia is the simultaneous administration of oxygen in order to prevent any degree of anoxia. One should not 'crowd' intravenous anesthesia in the presence of spinal anesthesia which is inadequate in an effort to obtain complete surgical relaxation. It is much safer to change to some form of inhalation anesthesia.