

its narrow margin of safety, would be a very good anesthetic agent. . . . Oxygen is literally 'the breath of life,' and its presence in adequate amounts is vitally essential to the existence of every living thing. . . . No patient in good physical condition under general anesthesia has ever shown any ill effects from the anesthetic as long as a sufficient amount of oxygen was present. . . . Untold harm has been done by employment of carbon dioxide in anesthesia. . . . Helium mixed with oxygen, as a purveyor of any other anesthetic agent, has, according to a number of authorities, greatly increased the safety of anesthesia. This is especially true in operations for pathological conditions of the mouth, face, and neck, or wherever edema or swelling may have caused a constricted airway. . . . A great number of cases in which tracheotomy has been averted due to the timely use of helium have been reported. . . .

"Probably the greatest advance in modern times for the safe administration of anesthetic agents, especially in maxillo-facial surgery, is the development of the use of endotracheal anesthesia. . . . Intravenous anesthesia seems to be especially suitable as a general anesthetic in maxillo-facial surgery. A free and open airway is vital. It is not recommended for children and inhalation of oxygen greatly reduces its hazards. Large doses of over 1.0 gram should be avoided, and the danger of overdosage cannot be overemphasized. . . . Preanesthetic sedation and basal narcosis have contributed much to the comfort and safety of the patient. . . . Routine premedication is to be condemned." 25 references.

J. C. M. C.

SEIBERT, C. W.: *Practical Application of Obstetric Analgesia*. J. Iowa M. Soc. 31: 583-585 (Dec.) 1941.

"The ideal obstetric analgesia must meet the following requirements: 1. It

must relieve all or most of the pain of labor. 2. It must not produce undue excitement in the mother rendering her incapable of cooperating in the second stage. 3. It must not affect the respiratory center of the infant, rendering it incapable of function soon after birth. 4. It must not increase postpartum bleeding. . . . It has been my experience that by a judicious use of an analgesic in moderate doses one is able to control the discomfort of the first stage without producing undue excitement and without any appreciable depression of fetal respiration. . . . For the actual delivery the patient may be given gas oxygen, open ether or the above may be combined with perineal block. Any repair work may be done under general anesthesia or one per cent novocain infiltration. In this way the patient receives a minimum of general anesthesia before delivery and the infant is practically never affected. . . . Obstetric analgesia is still an open question. No drug combination of drugs or technic yet discovered is ideal." 6 references.

J. C. M. C.

TAINTER, M. L., AND THRONDSO, A. H.: *Suitability of Butyn for Injection Anesthesia in Oral Surgery*. J. Am. Dent. A. 28: 1979-1986 (Dec.) 1941.

"Butyn is a local anesthetic closely resembling procaine in chemical structure, but differing from it considerably in potency and actions. As a topical local anesthetic, it is about ten times as strong as procaine, which makes it one of the most effective of this type. When injected into tissues, it is also highly active, although its potency is not much greater than that of procaine. Butyn suffers from the general defect that in animals its toxicity is considerably higher than that of procaine, and its use has had more reactions in patients. . . . It was thought

worth while to determine whether butyn was a useful and desirable local anesthetic for injection in oral surgery. It was also thought important to ascertain to what extent the added systemic toxicity, which butyn possesses, modifies the clinical results obtained under conditions of dental practice, and whether this toxicity is great enough to counterbalance its greater anesthetic power. . . .

"Butyn, 0.75 per cent, was compared with procaine, 2 per cent, in 231 patients subjected to oral surgical operations, using the 'blind test' procedure. The same volumes of the solutions were required, the speed of onset of anesthesia was the same, but butyn-anesthesia persisted approximately one hour longer than procaine-anesthesia. Both solutions modified the pulse rate, blood pressure and respiration in similar degree and in the same direction; therefore, there was no difference between them as regards these functions. The injection of butyn caused pain in about four times as many patients as did the injections of procaine; this indicating that the butyn was somewhat more irritating to the tissues when first injected. Incomplete anesthesia occurred somewhat more frequently with butyn than with procaine but the difference was too small to be significant. The amount of bleeding during the operation was much the same with the two solutions, indicating that neither had an advantage in this respect. Perspiration was produced by procaine injection in 18 per cent of the patients, as compared to 30 per cent by butyn. Nervousness occurred in 34 per cent of the procaine-cases as compared to 53 per cent of the butyn. Faintness occurred in 5.8 per cent of the procaine-cases, and in 15.1 per cent of the butyn. These results indicate that butyn injection had reactions much more frequently than did procaine during the course of the operation. However, in

spite of these differences, the operators thought that anesthesia was satisfactory in 78.7 per cent of the butyn-cases as compared to 83.9 per cent of those receiving procaine. During the post-operative period, pain and swelling at the site of the injection, trismus of the muscles from irritation and inflammation at the operative site were similar after the two solutions, within the range of individual variations. However, septic alveolus occurred in 15.6 per cent of the patients receiving butyn, and in only 7.9 per cent of those receiving procaine, indicating possibly another undesirable action of butyn. . . . Butyn would seem to have no advantage over procaine sufficient to outweigh its potential disadvantages, and procaine remains the anesthetic of choice for injections in dental local anesthesia. However, if there is a definite reason that procaine should not be used, butyn can be injected with assurance that it will be an effective and relatively satisfactory local anesthetic solution." 4 references.

J. C. M. C.

BURSTEIN, C. L., AND ROVENSTINE, E. A.: *Toxicity of Intravenous Paraldehyde*. Proc. Soc. Exper. Biol. & Med. 48: 669 (Dec.) 1941.

Intravenous paraldehyde for anesthesia of short duration has been frequently advocated by clinicians. The rapid induction and recovery following its use have suggested the impression that it is without toxic effects. We have attempted animal experiments in an effort to study the toxicity of this drug after intravenous administration. The drug was injected undiluted, 0.5 cc. per second.

Our results indicate a low margin of safety. The Minimum Anesthetic Dose rather closely approximates the Minimum Lethal Dose in cats, dogs and rabbits. Animals recovering from anesthetic doses looked poorly. After one