

now in about four dozen cases with 100 per cent success to the surgeon, the patient and himself. . . .

"The author can, . . . with confidence, recommend the use of this excellent British product to those experienced in the administration of intravenous anaesthetics and can assure them 100 per cent satisfaction. His impressions are that intraval sodium is as potent as any other intravenous barbiturate anaesthetic, that it is less likely to set up laryngeal spasm, and that it is less irritating to the tissues."

J. C. M. C.

VINING, J. A., AND SMITH, CODE: *Combined Pentothal, Curare and Nitrous Oxide Technic*. Bull. Acad. Med. Toronto. 21: 46-55 (Dec.) 1947.

"It is with the presentation of our experiences with the combination 'Pentothal, Nitrous oxide and Curare' in our first hundred cases that this paper deals. . . . In our review of past anaesthetic records we find that anaesthesia with the combination, pentothal and nitrous oxide has been used in a variety of cases. . . . Many of these anaesthetics were supplemented with cyclopropane and a few with ether. They provide a background for comparison with the new technic of pentothal, nitrous oxide and curare. . . . 'Pentothal, Nitrous Oxide and Curare' has been used with and without pre-operative sedation. . . . After premedication the patient is brought to the operating theater, placed upon the table and an intravenous drip of normal saline is started. . . . The curare solutions employed have been either Intocostarin (Squibb), d-tubocurarine chloride (Squibb) or 4-tubocurarine (Abbott). . . . The pentothal used has been 5 per cent in all cases. In our summary of cases two main classes stand out, namely those cases which require early intubation to provide optimal working

conditions such as the maxillo-facial and chest groups and, secondly, those cases where intubation is a nonessential. In the first class we have devised a technic using preanaesthetic curare in order to provide maximum muscular relaxation at the time of intubation. To obtain this, particular attention is paid to the timing of the administrations. . . .

"The observed effects of curare begin from one to two minutes after administration and reach a maximum at about six minutes. Pentothal is therefore started at the end of four minutes (by the clock) and continued in small doses ( $\frac{1}{2}$  to 1 cc.) p.r.n. When consciousness is lost the pharynx is sprayed under direct vision and by the time the curare effect is maximal the anaesthetic dose of pentothal has been reached (average 8 to 12 cc.) and the patient is intubated. This usually is done at the end of six or seven minutes. . . . Following intubation the pharynx is packed and the endotracheal catheter connected to the anaesthetic machine. The concentration of  $N_2O$  and  $O_2$  used varied from 50-50 to an 80-20 mixture. This is run at a rapid rate with the blow-off valve of the machine open in order to insure an even maintenance. In the second class of cases, where tracheal intubation is a nonessential, the intravenous drip was started as above and anaesthesia induced with pentothal followed by maintenance with pentothal and nitrous oxide and oxygen. In most cases curare is given immediately following the induction. . . .

"The disadvantages of the combined technic and the factors which limit its application are found in the patient, in the type of operation and the properties of the drugs employed. . . . We feel that upper abdominal cases are better handled with other technics than with pentothal, nitrous and curare." 4 references.

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