

relaxation, in cases with general toxemia and in certain exigencies of practice, such as a single-handed emergency. Mental instability, organic central nervous system diseases, septic condition in the lumbar area, pyema, some deformities of the spine, myocardial deficiency, profound anemia, low blood pressure and dehydration are contraindications to the use of spinal anesthesia. Sound judgment is only obtained by clinical experience with spinal anesthesia.

F. A. M.

CLARKE, L. T.: "*Gas, Oxygen, and Ether*. M. Press **216**: 466-467 (Dec. 18) 1946.

Literally the term "gas and oxygen" anesthesia means anesthesia produced by gas and oxygen only. This combination has a limited field of usefulness. It may be suitable for cases where muscular relaxation is not necessary. It has a wide field in minor surgery, the dressing of painful wounds, and in dental surgery. Often the term "gas and oxygen" is used improperly to describe a variety of anesthetics in which these agents are only part of the mixture or a vehicle for more potent agents. Heavy and cumbersome apparatus limits the usefulness of gas and oxygen anesthesia. The occasional anesthetist should be aware of the limitations of gas-oxygen anesthesia and of the asphyxial element which may be present as well as marked myocardial weakness or impending heart failure which may be present in some cases. There is evidence that a new era is beginning when deep general anesthesia will be unnecessary. Light anesthesia with some adjuvant, like d-tubocurarine chloride, will be used instead of profound inhalation anesthesia.

F. A. M.

SMALL, ALAN: *Anaesthesia in Gastric Surgery: A Surgeon's Point of View*. M. Press **216**: 464-465 (Dec. 18) 1946.

Pulmonary complications are among the greatest causes of mortality and morbidity following major gastric operations in the adult. The gastric surgeon demands an anesthetic which is safe and which allows him to perform an adequate and extensive operation. In addition he would like an anesthetic which is completely reliable in its effects and which reduces to a minimum the post-anesthetic complications. Most anesthetics in popular use today fall short of perfection. The anesthetic which most nearly approaches the ideal is curare with an inhalational agent. Intubation should be performed as a preliminary to the administration of curare. The anesthetist must be prepared for flexibility in dosage, he must be able to administer a non-irritating inhalation anesthetic, and be prepared for controlled respiration at any time. The smallest possible premedication should be given. The anesthetic of choice for operations for congenital pyloric stenosis is a local anesthetic administered by the surgeon. 1 reference.

F. A. M.

PLEASANCE, R. E.: *Intravenous Anaesthesia*. M. Press **216**: 467-469 (Dec. 18) 1946.

In 1872 Ore, of Lyons, France, gave the first successful intravenous anesthesia in man, using chloral hydrate. Subsequently a large number of drugs have been introduced and tested. Veronal, the first barbiturate to be synthesized, was introduced by Fischer and von Maring in 1903. The first barbiturate to be used intravenously was somnifaine, introduced by Fredet and Perlis in 1924. Pernoston was introduced in 1927, by Bumm; avertin in 1929, by Kirschner; sodium amyral

in 1929, by Zerfas; neubutal in 1931, by Lundy. Weese and Scharpff, in 1932, introduced evipan and in the same year Lundy introduced pentothal sodium.

Pentothal sodium is used in solution, usually in concentration of 2.5 per cent or 5.0 per cent. Induction of anesthesia is rapid and without excitement. The blood pressure may fall if the drug is given rapidly. Respiration is depressed; slow injection, however, rarely causes cessation of respiration. Laryngospasm may occur in early stages of anesthesia. The stages of anesthesia are produced rapidly and merge one into the other. Preliminary medication may be omitted in an out-patient. Atropine is useful in preventing the tendency to laryngeal spasm. The stomach, bowel and bladder should be empty.

The solution of pentothal sodium may be given by intermittent or continuous intravenous injection. A free airway and adequate oxygenation as well as provision for the relief of respiratory or cardiac failure must be included in the correct technic for administration of pentothal sodium. Correct selection of cases and slow, intermittent injection add to the safety of the method. The greatest danger is the ease with which pentothal may be administered. 6 references.

F. A. M.

SCOTT, C. C.; ROBBINS, E. B., AND CHEN, K. K.: *Comparison of Some New Analgesic Compounds*. Science **104**: 587-588 (Dec. 20) 1946.

A number of new analgesic agents prepared by German chemists possess marked pharmacologic properties. One of these, German serial No. 10820, has been reported. Six compounds, 10820, 10446, 10582, 10581, 10819, and 10720 have been studied and compared to demerol.

Analgesic action was determined in

rats by the method of Haffner and in dogs and man by thermal radiation technic. All six compounds were found to be more active analgesically when results in rats, dogs and men are compared. Demerol is identical with 10446 except that it has no OH-group in the metaposition of the benzene ring. The addition of this OH-group increases the analgesic action of demerol. The ketone form (10720) is more potent than the ester form (10446). Acute toxicity and analgesic potency parallel each other but the relationship is not exact.

Considerable and prolonged fall of blood pressure in anesthetized dogs followed injection of the drugs with the exception of (10720). Respiratory stimulation resulted from administration of the esters, whereas depression occurred with the ketones. Inhibition of salivary secretion approaching that caused by atrophine was noted with the esters but the ketones showed much less effect. With the doses studied mild side reactions, such as lightheadedness, occurred. Nausea and vomiting were relatively rare. Compound 10726 caused such severe vomiting that it was not tested in man. 5 references.

F. A. M.

LEECH, B. C.: *Safety Measures in the Practice of Anaesthetics*. Canad. M. A. J. **56**: 28-34 (Jan.) 1947.

The anesthetist must assume the role of fire prevention officer in preventing the ever-present danger of fires and explosions in operating rooms. Intelligent common sense by everyone in the operating room is imperative. Smoking, striking of matches, use of cautery, careless use of electric switches, woolen clothes or blankets in the operating section should all be avoided. The Horton intercoupler should be in constant use when explosive or inflammable anesthetics are in use.