

parous women. Dr. Katzman has observed this method in 43 additional cases at the Sibley Memorial Hospital. . . . The margin of safety is wide with pentothal sodium and an overdose is uncommon. The awakening period is usually smooth and we have observed no excitement during the induction. The patient must be attended. . . . We have had no complications in the administration of this drug. . . . Our clinical observations revealed no local irritation or inflammation in the rectum." 5 references.

J. C. M. C.

MARCO, J. D.: *Safety Factors in the Use of Intravenous Anesthesia*. Mil. Surgeon 95: 305-308 (Oct.) 1944.

"Pentothal Sodium in the hands of a trained anesthetist is a safe anesthetic agent. . . . The agent can be given with safety in any age group, remembering that the extremes of age are more susceptible to overdosage than those of the mean age. . . . There are certain definite contraindications, however; foremost among these are disorders which interfere with respiration. Since severe anemias reduce the oxygen-carrying power of the blood and thereby interfere with internal respiration, Sodium Pentothal should be avoided unless sufficient blood has been given to such a patient beforehand. Other contraindications are cardiac decompensation, severe kidney and liver disease, extreme obesity, diseases of the veins and obstructing lesions of the intestinal tract. Shock is not a contraindication for Pentothal Sodium anesthesia but it must always be borne in mind that the shock must primarily be treated. . . . For premedication a hypodermic of morphine and atropine is best given one to one and one-half hours prior to operation. A trained assistant is the next factor for consideration. . . . At present there is no scheme available for the computa-

tion of total dosage for the individual patient. In order to establish safety one must resort to the fractional method of instillation. . . . Too much emphasis cannot be placed upon the necessity of watching respiration. . . . Respiratory difficulties are most often mechanical obstruction of the upper air passage. . . . Routine use of the air way is not our custom because it may require deeper anesthesia than called for by the operation itself. . . . If breathing does not proceed normally discontinue the anesthetic and immediately after correcting the difficulty some form of artificial resuscitation should be instituted. . . . Whenever possible some form of supplemental oxygen should be used throughout anesthesia. . . . Following the use of Pentothal the patient should be watched by an attendant until he recovers from the anesthesia."

J. C. M. C.

MAIDLOW, W. M.: *Intravenous Anaesthesia: Continuous Positive-pressure Drip Saline with Intermittent Pentothal*. Brit. M. J. 2: 432-433 (Sept. 30) 1944.

"Many articles have recently appeared on pentothal anaesthesia with drip-feed continuous saline, and each of the various methods has its advantages and disadvantages. . . . I now use a three-way tap, which is situated close to a needle of medium length to facilitate removal of the syringe. One hand turns the tap, which is easily found even if covered with towels, and the same hand injects the pentothal, which is therefore admitted almost at the site of venepuncture, thus entirely overcoming all question of dead space. At the same time the flow of saline automatically ceases, and there can be no backwash or leakage up any tubes. The third arm of the tap runs to a reserve supply of pentothal in a gallipot slung in a ring on a metal stand. This

stand is clamped to the arm-rest or a table, if the leg is being used, and consists of an upright metal bar about 6 in. high, on top of which is a platform holding the metal clip from the box in which all Record syringes are supplied. The 20-cm. syringe rests in this, and is quite secure and out of the surgeon's way. The syringe here comes easily to the hand of the anaesthetist, who remains seated at the head. About 6 in. of narrow-bore thin-walled tubing runs from an adapter on the syringe to one arm of the three-way tap. Another arm carries the tubing from the drip bulb and bottle; a metal sinker holds the tubing in the reserve pentothal supply. . . . I aim at keeping the total dosage of that drug below 2 g. If the operation is likely to be long I always use $N_2O + O_2$ to supplement and cut down the dosage of pentothal. . . . I consider operations of longer duration than $1\frac{1}{2}$ hours generally to be unsuitable for pentothal, as are also those in which there is considerable surgical trauma and strong stimuli are evoked. . . . In my experience this form of anaesthesia is also unsuitable for abdominal explorations and for appendicectomies in robust individuals. . . . I have used intermittent pentothal with a saline or glucose drip for very long operations such as cholecystectomy, gastrectomy, anastomotic operations, and Gallie's herniorrhaphies performed under spinal analgesia." 4 references.

J. C. M. C.

DENNISON, W. M.: *Apparatus for Continuous Intravenous Anaesthesia*. Brit. M. J. 2: 437 (Sept. 30) 1944.

"A three-legged douche-stand on wheels forms a secure and mobile base for the apparatus. To one of the four uprights a wooden panel is clamped. This panel carries the saline and pentothal containers, fine-adjustment screws, and a double-drip bulb. The

saline container is the standard 500-c.cm. glucose-saline-giving bottle, held in position by a shoulder collar and a strong spring clip. The anaesthetic solution is carried in the barrel of a 20-c.cm. syringe fitted with a rubber stopper perforated to carry a glass tube with filter wool. The double drip is formed from the filter from a Horrocks infusion set, the doubly perforated flanged bung from a transfusion set, and two short pieces of glass tubing drawn to a fine point. The anaesthetic container and the drip bulb are held in position by the clips on the clip rack from a 20-c.cm. Record syringe case. Both clip racks are permanently fixed to the base-board. Fine-bore rubber tubing is used throughout, and the needle (Wassermann size) is attached to a glass vein-seeker. . . . The arm is splinted in the usual fashion and a sphygmomanometer cuff is employed to render the veins prominent. The saline flows continuously at 40 to 60 drops a minute, and the anaesthetist need only give a light touch with two fingers to turn off the pentothal. The intravenous anaesthesia is combined with light gas-and-oxygen when required."

J. C. M. C.

ROBERTS, F. W.: *An Introduction to Intravenous Anaesthesia*. Clin. J. 73: 179-182 (Sept.-Oct.) 1944.

"I do not believe that anyone without special training should attempt the more complicated intravenous anaesthetics, but after leaving hospital most newly qualified men will find either in the Forces or in civilian practice that occasionally they will be called upon to give simple anaesthetics and, especially in the Forces, they will find pentothal available and often the only practicable agent. Therefore every medical student should have some experience in simple intravenous anaesthesia and a knowledge of its special limitations and pitfalls. Drugs used