

of albuminuria or other constitutional condition in which a general anaesthetic, especially chloroform, would be contra-indicated. The cases in which it would not be suitable are: 1. The application of the forceps when the head of the child is high up and the uterus is contracted on the occipito-posterior position of the child. . . . 2. Any abnormal presentation requiring intrauterine manipulation. . . . 3. Any disease of the central nervous system or of the vertebrae or any septic condition at the site of the lumbar puncture. In administering the anaesthetic the aim is to confine the anaesthesia so far as possible to the level which would affect the perineum and pelvic floor, i.e., a low spinal anaesthesia. . . . In the series of cases reported the earlier ones had planocaine 10 per cent, the specific gravity being 1032 and the later ones had the same preparation in 20 per cent strength with a specific gravity of 1040. The latter solution was found to produce the better result and a dose of 0.5 cc. to 0.75 cc. was found to be sufficient. . . . Among the 60 patients there was only one maternal death, the case being of severe bronchitis with dyspnoea, in which a general anaesthetic was contra-indicated." 4 references.

J. C. M. C.

JOSEPH, MORRIS: *Twenty-five Years of Spinal Anesthesia (with a Report of 1020 Consecutive Cases)*. J. M. Soc. New Jersey 41: 6-10 (Jan.) 1944.

"Preliminary sedation is vital to satisfactory spinal anesthesia as it is for any surgical case, regardless of the type of anesthesia used. . . . The site for the spinal puncture and injection is selected, depending on the type of operation contemplated. . . . For many years novocaine was used for shorter cases, usually estimated beforehand not to exceed one hour. For longer cases pontocaine has been found very satis-

factory. . . . Spinal anesthesia can be administered much more easily and safely than general anesthesia. . . . It is far more economical and less complicated in its application. The morbidity and mortality are far lower than in general anesthesia. The perfect relaxation of abdominal muscles and contents makes for better surgery." 9 references.

J. C. M. C.

RUDDER, F. F.: *A Mechanical Aid for the Administration of Pentothal Sodium Intravenous Anesthesia*. Mil. Surgeon 93: 426-427 (Nov.) 1943.

"In order that one anesthetist might successfully administer . . . [pentothal sodium] with minimal effort, I . . . [have devised] a syringe holder which has simplified the technique. . . . The anesthetist [injects] a 2½ per cent solution by simply turning the gear wheel of a rack and pinion gear attachment. The movable arm of this attachment contacts the plunger of the syringe and the drug can be given drop by drop when needed. No clotting can occur in the needle, because the movable arm against the plunger allows no back flow."

J. C. M. C.

ROBERTS, F. W., AND SELICK, B. A.: *Continuous Administration of Intravenous Anaesthesia*. Brit. M. J. 2: 813-814 (Dec. 25) 1943.

"The apparatus [used by the authors] is a positive-pressure drip saline infusion apparatus, consisting of a saline reservoir, drip-bulb and tubing, glass aspiration indicator, needle, and a means of providing positive pressure. . . . Pressure is raised in the saline reservoir and the regulating clip opened, allowing saline to flow until all air bubbles are removed. The clip is closed, and the level in the drip-bulb is adjusted by the clip on the side tube. The patient is then in-

duced, using up to 0.5 g. of 5 per cent pentothal solution in a 10-c. cm. syringe. . . . Positive-pressure drip apparatus eliminates the cumbersome unstable stand required by gravity drips, and as the saline reservoir can be placed quite near the vein, long lengths of tubing are avoided. The glass aspiration indicator facilitates venipuncture. Should the needle become dislodged between the injections of pentothal, saline only will be introduced into the subcutaneous tissues. . . . More important is the lack of 'dead space' in the apparatus we describe; hence there is minimal delay in action of the drug due to 'backwash' and uncontrollable dilution." 9 references.

J. C. M. C.

LUNDY, J. S.; ADAMS, R. C., AND SELDON, T. H.: *Intravenous Administration of an Anesthetic Agent: a Comparison of the Technic for Robust Patients and for Patients in Shock*. U. S. Nav. M. Bull. 42: 11-16 (Jan.) 1944.

"The relative newness of the use of pentothal sodium as an intravenously administered anesthetic agent made it probable that its widespread use would not be attended with the best results under certain circumstances. Reports concerning untoward results obtained with this method following the Pearl Harbor disaster indicated very clearly that something was wrong. It was our opinion that, in cases in which the anesthetic agent was unsatisfactory, especially in the presence of shock, it probably had been administered by the technic usually employed for a robust person. . . . It seems desirable, at this time, to emphasize again cautions that may be utilized in practice to make the intravenous method relatively safe. We shall attempt to illustrate the similarities and dissimilarities of the two methods. Preoperative preparation.

1. Any patient.—The stomach must be empty; the bladder and the rectum should be empty. 2. Robust patient.—No special precautions other than those given under 1 are necessary. 3. Patient in shock.—In addition to precautions given under 1, parenteral therapy should be started; preferably a 15-gage needle should be introduced into a vein and the administration of blood, plasma, or parenteral fluids should be begun. Preoperative medication. 1. Average patient.—The patient is given a hypodermic injection of  $\frac{1}{6}$  grain (0.01 Gm.) of morphine sulfate and  $\frac{1}{150}$  grain (0.00043 Gm.) of atropine sulfate 40 minutes before administration of the anesthetic agent, or an intravenous administration of those drugs 5 to 10 minutes before administration of the anesthetic agent. 2. Robust patient.—The patient is given a hypodermic injection of  $\frac{1}{4}$  grain (0.016 Gm.) of morphine sulfate and  $\frac{1}{150}$  grain (0.00043 Gm.) of atropine sulfate 40 minutes before administration of the anesthetic agent, or an intravenous administration of those drugs 5 to 10 minutes before administration of the anesthetic agent. 3. Patient in shock.—The patient may be given a hypodermic injection of  $\frac{1}{6}$  grain (0.008 Gm.) of morphine sulfate and  $\frac{1}{150}$  grain (0.00043 Gm.) of atropine sulfate 40 minutes before administration of the anesthetic agent, or an intravenous administration of those drugs 5 to 10 minutes before administration of the anesthetic agent. If shock is severe, the preliminary medication is omitted.

"Venipuncture. 1. Average patient.—A tourniquet is placed within 2 inches (5 cm.) of the site of venipuncture and a 20-gage, short needle with beveled edge is used on a 20 cc. eccentric-type Luer-Lok syringe. 2. Robust patient.—Venipuncture is usually a simple matter, as in 1. 3. Patient in shock.—It may be necessary to search for some time until a suitable vein can be located; fairly frequently it may be