

ABSTRACTS

Editorial Comment: Material for this section is not abstracted in a uniform style. Many employ direct quotations only. Others are written in the more conventional form. At times there may be included a few opinions, personal to the abstractor, which, where they appear, will be bracketed or labeled "Comment." The Editorial Office continues in its desire to receive correspondence from readers relative to the management of this section.

BURDICK, D. L.; PHELPS, MCK. L., AND PETERSON, M. C.: *Anesthesia for Sympathectomy in Hypertension*. New York State J. Med. 46: 2139-2141 (Oct. 1) 1946.

Criteria for the selection of patients for operation for the treatment of essential hypertension vary in different clinics. Prognostic tests which will affect the sympathetic nervous system have only added to the differences in the selection. Loss of muscle tone and modifications in respiration may produce a false prognostic picture. Such is the case with spinal anesthesia. avertin and intravenous pentothal sodium. Recent reports of the use of continuous caudal anesthesia seem hopeful not only in selection of the patients but also in indicating the extent of surgery necessary for the desired result in each individual case.

With more extensive surgery now being used, the anesthetic management becomes more important. The technics may involve a longer operating time and an open chest. Adequate oxygenation must be insured. Intratracheal anesthesia, light premedication and controlled respiration when indicated are parts of the present management of these patients. Periodic inflation of the collapsed lung should be done throughout the operation. Circulatory disturbances occur more often and with greater severity when the operation is extensive and prolonged. Pulmonary

edema may develop. Neosynephrine continues to be the most valuable drug for treating disturbances of blood pressure. Infusion of 5 per cent glucose in saline or water is started and 0.02 Gm. (2 cc.) neosynephrine is added to each liter. Regulation of the rate of flow maintains a fairly even blood pressure. At the conclusion of the continuous intravenous administration neosynephrine 0.0013 Gm. (2 min.) is given as needed. Injection by the surgeon of procaine hydrochloride, 2 per cent, about the ganglia and chain as soon as they are exposed may help control the fluctuations of blood pressure which sometimes occur. The administration of plasma may prove deleterious, especially in the face of pulmonary edema. The treatment of pulmonary edema is manual positive pressure in the operating room and by positive pressure mask thereafter. Intravenous therapy should be regulated judiciously.

F. A. M.

KNIGHT, R. T.: *Combined Use of Sodium Pentothal, Intocostarin (Curare), Nitrous Oxide*. Canad. M. A. J. 55: 356-360 (Oct.) 1946.

A combination of pentothal with curare and nitrous oxide and oxygen has been used. Pentothal, probably the best hypnotic we have ever had, does not provide adequate relaxation unless administered in doses which pro-

duce depression. Nitrous oxide has moderately good analgesic properties but is a weak anesthetic. Thirty per cent oxygen should be given to the patient under anesthesia to insure safety and good physiologic effect. Curare in the form of intocostrin disconnects the myoneural junction, thus producing relaxation. It may also produce some degree of analgesia in larger doses. Curare is used with cyclopropane. Pentothal and curare are both administered intravenously. Various proportions of the two drugs have been tried. "The proportion that has worked most satisfactorily is 10 units of intocostrin with each 25 milligrams of sodium pentothal." "The sodium pentothal has customarily been used in 2½ per cent solution. Translated into volume, this proportional administration is 1 cc. of intocostrin to each 2 cc. of 2½ per cent sodium pentothal. This ratio is administered from the very beginning of induction, 2 cc. of 2½ per cent sodium pentothal followed by 1 cc. of intocostrin, this quantity of both being repeated at short intervals until the patient becomes unconscious. Half of the above quantities is then administered intermittently until the desired plane of anaesthesia is reached. In the meantime, as soon as the patient loses consciousness, the anaesthesia mask is applied, the bag having previously been filled with a mixture of ⅔ nitrous oxide and ⅓ oxygen. The flow is then continued at 500 cc. each of nitrous oxide and oxygen per minute."

The anesthetic mixture can be used for any type of surgery. The mixture is non-inflammable and non-explosive. Hiccups have occurred in about one in 15 or 20 patients. This has been controlled by "controlled respiration" or the addition of a small amount of cyclopropane. Increased sodium pentothal-curare stopped the respiration and the hiccup. Respiration was then carried on by compression of the bag. In-

tratracheal tubes have been inserted after the induction with pentothal-curare. Relaxation was adequate. Pentothal and curare are kept separate from each other because they precipitate. After injecting either one of the drugs the tubing and needle are washed down with a small amount of physiologic saline, 5 per cent dextrose or blood transfusion.

F. A. M.

SULKIN, S. E.; ZARAFONETIS, CHRISTINE, AND GOTH, ANDRES: *Influence of Anesthesia on Experimental Neurotropic Virus Infections. I. In Vivo Studies with the Viruses of Western and Eastern Equine Encephalomyelitis, St. Louis, Encephalitis, Poliomyelitis (Lansing), and Rabies.* J. Exper. Med. **84**: 277-292 (Oct. 1) 1946.

Past attempts to find an adequate method for the treatment of the neurotropic virus diseases have been largely unsuccessful. The ideal agent would destroy the virus without causing permanent injury to the host cell and should have the same tissue predilection as the virus. General anesthetics seem to fall in this category. Some experiments have been done on the effects of some anesthetics on certain toxic diseases affecting the central nervous system. It was decided to investigate the effect of anesthesia on those diseases already studied as well as others.

The virus of Eastern equine encephalitis was shown to be destroyed by ether. "Anesthesia with diethyl ether significantly alters the course of experimental infections with the equine encephalomyelitis virus (Eastern or Western type) or with the St. Louis encephalitis virus. No comparable effect is observed in experimental infections with rabies or poliomyelitis (Lansing) viruses. The neurotropic virus infec-