

is some synergistic action when pentothal is given with nitrous oxide-oxygen and with cyclopropane. As a preliminary to spinal anesthesia pentothal is most effective. Pentothal more closely fulfills the postulates of an ideal anesthetic than any other agent yet evolved. By recognizing the limitations and hazards associated with pentothal administration the drug should play an increasing role in present day anesthesia. 6 references.

F. A. M.

PICKETT, W. J.: *Refrigeration in Surgery of the Extremities*. Illinois M. J. 91: 74-75 (Feb.) 1947.

Ten cases of gangrene of the extremity at the Cook County Hospital were treated by refrigeration. What once would have been a desperate emergency can now be done as an elective procedure. From a few days to a week of refrigeration is allowed during which time thorough preparation of the patient is carried out. Two cases in this series died from shock and sepsis within twenty-four hours following operation and one case died of bronchopneumonia and auricular fibrillation two months after operation. 5 references.

F. A. M.

KNIGHT, R. T.: *Curarc in Anesthesia*. J. Indiana M. A. 40: 125-127 (Feb.) 1947.

Curare has probably come into general use in anesthesia faster than any other drug which has entered the field of anesthesiology. The blocking of the neuromuscular junction is well recognized but there is a continuing interest in other possible pharmacological effects and new variations in the technic of using the drug. Intocostrin has been the only available standardized preparation, but recently the active principle in crystalline form was isolated

and the name d-tubocurarine given to it.

The relaxation necessary for present-day extensive abdominal surgery necessitates a greater dose of general anesthetics than is desirable. Prostration results from the large doses of anesthetics and recovery is delayed. With the use of curare it is possible to limit the amount of a general anesthetic to that necessary for producing unconsciousness and produce relaxation with curare.

One school of thought holds that curare is an aid in those cases in which relaxation is obtained with difficulty. The other school holds that since curare exhibits less signs of harm than almost any other drug we have had, it should be used almost routinely to avoid using any but the lightest doses of general anesthetics.

Unconsciousness may result from extremely large doses of curare but this effect is not dependable. Under very light anesthesia laryngospasms may be encountered upon introducing a laryngoscope. The lighter the anesthesia the greater is the dose of curare necessary to produce relaxation. When the abdomen has been relaxed with curare the bowel is apt to be more relaxed than under spinal anesthesia. Curare may cause an elevation of the blood pressure when the respiratory minute-volume is decreased by relaxation of the abdominal and intercostal muscles. In an occasional patient a moderate vascular relaxation results in a moderate lowering of blood pressure. Ephedrine may be used in such a case. Curare covers up all the signs of anesthesia except the reflex response of the diaphragm to stimulation. Holding or irregular movements of the diaphragm will occur if the anesthesia is at the level between the second stage and the first plane of the third stage.

Nitrous oxide and pentothal together are well adapted to use with curare.