

thene deteriorates rapidly at any temperature, with the formation of aldehydes in considerable quantity. These aldehydes, on the addition of an acid or any hydrogen ion, will polarize and form resins which are definitely toxic to laboratory animals, causing convulsions. On the other hand, the mental symptoms would appear to indicate some form of cerebral damage, fortunately not of a permanent nature. So far as the author is aware no death under vinesthene anesthesia has yet been recorded, although in experimental animals an overdose has resulted in death from a condition resembling acute yellow atrophy. It is therefore recommended that anesthesia with vinesthene should not exceed an hour in duration. The author has, however, given it for three and a half hours without the occurrence of any untoward symptoms. Until a fatality occurs, which he hopes may never take place, it is unlikely that the pathology of vinesthene convulsions will be determined.

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COOK, W. B.: *Convulsions associated with nitrous oxide-ether anesthesia.* Northwest Med. **39**: 182-183 (May) 1940.

"This patient, a thin female of 29 years of age, was operated on at the Swedish Hospital on August 7, 1939. She had never had chorea or epilepsy.

"Nitrous oxide and ether anesthesia was administered by one of the regular anesthetists of the hospital. She had one-sixth of a grain of morphine and  $\frac{1}{150}$  grain of atropine three quarters of an hour before operation. The cervix was coned out with a cervical electrode and a supravaginal hysterectomy for fibroid of the uterus was done. She was a very excitable and apprehensive person and had refused spinal anesthesia. She took the anesthetic

poorly and there was more or less labored breathing at times.

"As the fascia was being closed, which was one hour and fifteen minutes from the beginning of the operation, she began to have twitching of the eyelids which rapidly spread to the muscles of the face and neck, and then to the arms and finally the entire body was in generalized convulsions. There was embarrassment of respiration and her pulse was weak. The convulsions actually lasted twelve minutes, but it seemed a lot longer than that to me.

"She was given oxygen without any improvement and then 15 cc. of calcium gluconate were given in the vein, thinking the condition might be related to tetany. This did not improve the situation. Five cc. of a five per cent. sodium solution were injected in the vein, and the convulsions rapidly subsided. The operation was completed and she was returned to her room. The convulsions did not recur.

"Perhaps the causes of convulsions during general anesthesia are many and varied, and cannot be satisfactorily explained. It may suffice to know that such a condition, paradoxical as it may seem, may occur when you think the operation is almost completed. These convulsions occur late. They begin in the muscles around the eyes and face. The pupil is dilated, and instead of crowding the anesthetic, it should be removed entirely. Dr. Lundy recommends intravenous barbiturates, and in this case pentothal sodium was very helpful." Bibliography—4 references.

J. C. M. C.

MURPHY, FRANK J.: *Anesthesia and anoxemia in relation to the use of nitrous oxide.* Surg., Gynec. & Obst. **70**: 741-743 (Apr.) 1940.

Recent medical literature has brought forth a wealth of articles deal-