sional postoperative restlessness which can be controlled by a small injection of morphine (gr. 1/6) immediately after the operation. This is the more advisable as chloral is not an analgesic. Our experience with chloralhydrate leads us to believe that it deserves to be used more widely as premedication. . . . In about 160 cases—chloralhydrate with atropine proved to be a safe and satisfactory preoperative medication. . . . The effect of chloralhydrate on the blood-pressure has been more closely studied and found to be far short of the danger line." 14 references.

J. C. M. C.

HIMMELSBACH, C. K.: *Further Studies of the Addiction Liability of Demerol (1-methyl-4-phenyl-piperidine-4-carboxylic acid ethyl ester hydrochloride).* J. Pharmacol. & Exper. Therap. **79**: 5–9 (Sept.) 1943.

"Demerol possesses the liability of producing physical dependence similar to that caused by morphine. . . . In clinical doses the addiction liability of Demerol is less than that of morphine. . . . As an addiction preventive measure, caution and restrictions similar to those involved in the clinical use of morphine should be applied to Demerol." 8 references.

J. C. M. C.

FORBES, J. C., AND EVANS, E. I.: *Protective Action of Sulfanilamide Against Hepatic Damage from Chloroform Inhalation.* War Med. **4**: 418–421 (Oct.) 1943.

"The exigencies of modern warfare often require the use of materials and methods in medical practice which are not altogether those that one would choose in a more leisurely civilian practice. This is particularly true in the case of anesthetic agents and methods. Most such agents now available for civilian use are somewhat bulky and require more or less elaborate apparatus for their administration. It is particularly for these reasons that chloroform is being used to such a great extent as an anesthetic by certain armies at the present time. . . . Chloroform fulfils many of the requirements of an anesthetic for use during battle action, by Navy medical groups. However, experience in the past has shown that, although it possesses some of the characteristics of the ideal anesthetic agent, it unfortunately in a certain percentage of cases seems to produce definite secondary damage to the liver. . . . Since the chief purpose of the investigation was to determine whether sulfanilamide exerts any protective action against the damage to the liver from chloroform, it was decided to kill the animals [rats] about twenty-four hours after the time of acute poisoning and examine the livers histologically. . . . Since many of the rats anesthetized with chloroform apparently died of causes other than hepatic damage, it was decided to study rabbits in the hope that this complication could be avoided. . . .

"Only in [one] experiment . . . did a treated animal show hepatic damage comparable to that of the least affected corresponding control animal. . . . With the increasing local use of sulfanilamide powder in wounds received in combat, it does not appear that a recommendation that sulfanilamide (or other sulfonamide compound) be given preoperatively to wounded men who are to be anesthetized with chloroform is out of order. . . . It would seem wise to give the sulfanilamide soon enough so that a 'therapeutic' level of the drug will be attained in the blood stream and liver before the chloroform is administered. The interval may be very short with sulfanilamide because of its rapid absorption, but it may have to be prolonged if one of the less soluble

sulfonamide compounds is used. If evidence of hepatic damage is manifest before chloroform must be administered, it would appear from the experiments of Machella and Higgins that sulfanilamide may be given with safety and even with assurance that it will exert some protective action on the already damaged liver. Although our present experiments indicate that sulfanilamide has a protective action against damage to the liver from inhalation of chloroform, we wish to state emphatically that it should not be construed from this that we are endorsing chloroform as the anesthetic agent of choice for wounded men. We wish merely to present evidence of a possible means of protecting the liver against the damage from chloroform when, in certain emergencies, it is considered that this anesthetic agent must be used." 3 references.

J. C. M. C.

VESSELL, V. E.: *Anaesthesia: from the Patient's Point of View.* M. Press. **210**: 237–239 (Oct. 13) 1943.

"The first essential to success is a thorough examination of the patient. . . . As basal narcotics the most popular are pentothal sodium, avertin and paraldehyde. Pentothal is the most valuable of all of the anaesthetic agents, but it cannot be too strongly emphasised that, owing to its very potent and rapid action together with its marked respiratory depressant effects, its use should be confined to those who are familiar with the principles, theory and practice of anaesthesia. . . . All operations upon the limbs, with the exception of the larger amputations, can be efficiently anaesthetised with omnopon-scopolamine, followed by pentothal, or pentothal, nitrous oxide and oxygen. . . . For operations upon the thyroid gland there is nothing to equal avertin . . . preceded by a maximum dose of omnopon gr. 1/3 with scopolamine gr. 1/150 and followed by nitrous oxide-oxygen. . . . With regard to inguinal herniorrhaphy, when the removal of the sack only is necessary, pentothal-nitrous oxide-oxygen will fulfil all requirements, but when a definite repair is to be undertaken complete relaxation is essential. This can be effected by avertin-nitrous oxide-oxygen, with the addition of a small amount of either trichlorethylene or ether. . . Provided the patient's condition is not too toxic, spinal anaesthesia is definitely indicated in cases of strangulated herniae and not uncommonly reduction follows the injection. . . . For tonsillar enucleation when due heed is paid to haemostasis, compassionate anaesthesia is best effected by avertin-nitrous oxide-oxygen-trilene administered through the medium of an endotracheal tube passed nasally. . . . Operations in the anal region demand deep narcosis, and a caudal block with light percaine followed by nitrous oxide-oxygen fulfils all requirements. . . .

"For high abdominal operations, for prolonged surgical procedures, for those operations which result in severe shock, or when the patient is suffering from some pulmonary lesion, the writer is definitely in favour of pentothal-light percaine spinal-nitrous oxide-oxygen. . . . For short, low abdominal operations, such as appendicectomy, avertin-nitrous oxide-oxygen with minimal quantity of trilene or ether is quite satisfactory, but a difficult retrocaecal appendix in a robust subject does better with a spinal anaesthetic."

J. C. M. C.

MCNEARNEY, JOE: *Continuous Spinal Anesthesia.* J. Missouri M. A. 40: 348–349 (Nov.) 1943.

"Continuous spinal anesthesia is controllable anesthesia. There is no