cent oxygen by inhalation, is one of the safest methods for anesthetizing patients of doubtful risk. Light pentothal sodium anesthesia forms a satisfactory supplement to spinal anesthesia when indicated and aids in the control of nausea and mental trauma. Small doses, slowly administered, are indicated, since the circulatory and respiratory functions already are depressed by the spinal anesthesia. . . . Certain operations carry with them more than the usual degree of risk. . . .

"Modern methods of preoperative and postoperative treatment and advances in the field of surgical shock and supportive therapy have changed the condition of many patients from that which constituted a poor surgical risk to one for which the risk was fair or even good. Modern methods of intravenous therapy, such as administration of sodium chloride, dextrose, and so forth, have been important. . . . The use and value of chemotherapy, particularly with the sulfonamide compounds, for infective conditions, is well known. High in the scale of importance is the treatment of shock during and after surgical operations. . . . Varying degrees of shock occur during any operative procedure, depending on the preoperative condition of the patient, the anesthetic, and the type and duration of the operation. It is obvious that debilitated, anemic, toxemic, and functionally abnormal patients will succumb to shock both more easily and to a more profound degree than will more normal patients. Therefore, the anticipation of the need of treatment for shock is particularly important in a case in which the risk of operation is poor. If shock is to be treated effectively, it must be treated promptly. Better still, if it is known that the patient is in poor condition, the shock should be treated before it actually occurs. This is accomplished by various measures, depending on the urgency. A fall in blood pressure during the operation need not be serious if it is not persistent and if it is not associated with marked loss of fluid or blood. Vasopressor agents, such as ephedrine or neosynephrin hydrochloride, may be injected intramuscularly or intravenously in order to elevate the blood pressure. If the fall in blood pressure occurs in the presence of marked loss of fluid (profuse sweating) or is obviously attributable to hemorrhage, vasopressor agents give only transient relief and a false sense of security.

"A pale, cold, clammy patient is in a state of shock and needs fluids, blood, or both. In the management of patients for whom the risk of operation is great it is safest to start an infusion of physiological saline solution or a 5 per cent solution of dextrose in physiological saline solution at the beginning of the operation. . . . Transfusion of blood is the best means of combating shock. The amount necessary will depend on preoperative level of hemoglobin, the amount of blood lost during the operation, and the response of the blood pressure, pulse rate, blood volume, color, and skin. . . . The use of plasma, which can be stored in the desiccated state and redissolved before use, provides all the elements of whole blood for treating shock, with the exception of erythrocytes. By its use, shock may be controlled for several hours, even after marked hemorrhage has occurred." 46 references.

J. C. M. C.

MYERS, R. D.: *Injection Anesthesia.* Ohio State M. J. 38: 459–460 (May) 1942.

"The two most efficient and widely used drugs for block and infiltration anesthesia are procaine hydrochloride and Lilly's metycaine. . . . The usual preoperative preparation of an adult consists in the administration of a bar-

biturate . . . combined with 1/32–1/24 of dilaudid or 1/6–1/4 grain of morphine plus 1/100–1/150 grain of atropine 45 minutes before the administration of the anesthetic. . . . Sacral block anesthesia for operations in the perineal region is superior in many ways to any other form of anesthesia. . . . The patient may be placed in any position desired by the surgeon immediately upon completion of the block; nausea and vomiting, during the operation, are rare; it is the longest lasting of the various block anesthetics; there is no distortion of the operative field, as occurs in infiltration anesthesia; it wears off slowly, permitting the administration of morphine before sensation returns, making the postoperative course more comfortable to the patient; the toxic effects of general anesthesia are reduced; there is seldom any postoperative nausea and vomiting; postoperative headache is eliminated; catheterization of the patient is not necessary as frequently as in spinal anesthesia; the contributing factor of anesthesia to pneumonia is eliminated; shock is rarely encountered; electrical apparatus may be used freely and safely; fluids by mouth may be given freely, . . . without untoward effect. . . .

"In spinal anesthesia either procaine or metycaine is used. The preoperative preparation is essentially the same as for sacral block. A vasoconstrictor drug, perferably ephedrine, should be administered in the higher spinals. . . . Spinal anesthesia offers advantages for many types of operations impossible to obtain with any other anesthetic. . . . The abdominal block of the anterior abdominal wall, using one-half to 1 per cent procaine, is beneficial, especially in debilitated subjects and for prolonged operations within the abdomen. . . . Brachial plexus and cervical blocks are, at the present time, the least used and the least satisfactory of the block anesthetics due to the fact that it is impossible to obtain perfect anesthesia in some cases. . . . Infiltration anesthesia by using 1 per cent or 2 per cent procaine solution injecting with different length needles into the tissues surrounding the part or through which the sensory nerves pass to the part to be operated is applicable to tumors of the skin and subcutaneous tissues, fractures, finger and toe operations, circumcisions, etc."

J. C. M. C.

DRAPER, W. B., AND WHITEHEAD, R. W.: *Chances of Resuscitation after an Overdose of Ether, Divinyl Ether and Chloroform.* Lancet 1: 442–444 (April 11) 1942.

"An anaesthetic death may be regarded as the end-result of two successive accidents. First a potentially lethal overdose is administered, and afterwards there is failure to resuscitate. The varied and complicated circumstances which always surround death under anaesthesia usually provide a plausible explanation for the tragedy, but in the final analysis the same ultimate cause can be seen to have operated: there was failure to resuscitate. Safety in anaesthesia, therefore, depends to some degree on success in resuscitation. . . . Although certain of the properties which make resuscitation possible—such as the effect of the drug on the various components of the circulatory system and the rate of its elimination—have been intensively studied, no one so far as we are aware has made a systematic attempt to determine the probability of resuscitation from a standardised lethal dose of an inhalation anaesthetic. . . .

"Doses of ether, divinyl ether and chloroform, measured per kg. bodyweight, were administered to dogs. . . . The dose given was the minimal amount required to produce an apparently permanent respiratory arrest in the