

ent experience it seems clear that the transpleural approach may in fact produce no more shock and perhaps even less than the transabdominal wall approach to the stomach. Thus, in addition to compelling anatomical reasons for approaching certain upper abdominal lesions through the thorax, the surgeon may be supported by a further fact: The excellent operative tolerance of the patient for the transpleural approach. . . .

"Ether anesthesia briefly induced with nitrous oxide is our choice. This is occasionally supplemented with procaine block of the vagus nerve and its pulmonary plexus as well as by frequent block of the phrenic nerve. . . . Intratracheal intubation is essential, for it is only with an intratracheal tube in place that an open airway can be assured at all times. . . . The presence of the intratracheal tube also makes it possible to combat another possible hazard of the transpleural approach: the sudden, acute pulmonary edema which may develop if one lung long remains collapsed. . . . Elderly patients in this group may be prone to develop gross pulmonary edema if one lung is allowed to remain acutely collapsed. In no patient should the lung be allowed to remain collapsed for more than 30 minutes or so at a time. . . . Facilities for rapid bronchial aspiration, as well as positive pressure anesthesia when necessary, are important. A closed gas machine with carbon dioxide absorption and a tight face mask complete the list of essentials. . . . The anesthetist must take the responsibility for protecting the patient from needless strain. He warns against unnecessary heat loss in a too cold operating room; he minimizes harmful vagal reflexes by requesting that the vagus nerve or its branches be blocked with local anesthesia when cardiac and respiratory variations indicate the need, or he diminishes vagal activity by administering atropine; he watches

for prodromal signs of shock and when necessary warns the surgeon of their development; he directs the administration of blood or blood substitutes; he guards against oxygen shortage or carbon dioxide excess. . . . Reasons for the patients' excellent tolerance for the transpleural approach to the stomach are found in the fact that in transpleural gastric surgery a far lighter level of anesthesia is possible than is true in the case of the transabdominal wall approach. In the former case the only relaxation needed is that of the diaphragm, obtained by block of the phrenic nerve under direct vision. Furthermore, in the transpleural approach to the stomach disturbance of the other abdominal viscera, well known to cause harmful circulatory effects, can largely be avoided. When the gastric surgery is carried out through the anterior abdominal wall, evidence is presented that the circulatory system tolerates ether anesthesia better than spinal or splanchnic block anesthesia." 5 references.

J. C. M. C.

BATTERMAN, R. C., AND HIMMELSBACH, C. K.: *Demerol—a New Synthetic Analgesic: a Review of Its Present Status and Comparison with Morphine*. *J. A. M. A.* 122: 222-226 (May 22) 1943.

"The increased need for morphine in time of war and the present threat to our opium supply make it important that appropriate consideration be given to the new analgesic Demerol, for this compound can be prepared synthetically from available chemicals. . . . Demerol (1-methyl 4 phenyl-piperidine 4-carboxylic acid ethyl ester hydrochloride) was synthesized in 1939 by Eisleb and Schaumann. It represents one of a large group of piperidine compounds possessing spasmolytic properties. Its close similarity to atropine can be discerned on inspection of the

chemical formulas. It is therefore not surprising that Demerol possesses mild atropine-like properties. Of greater interest, however, was the unexpected finding that the drug had a morphine-like effect on the central nervous system of animals. Definite analgesia comparable to that of morphine without the occurrence of a striking depression of the central nervous system has been reported. While close chemical similarity of morphine and Demerol is difficult to visualize in a flat plane, it is possible with molecular models to discern similarities involving particularly the piperidine ring. . . . Demerol possesses three main actions: analgesia, spasmolysis and sedation. . . .

"With the exception of the production of cough and diarrhea, Demerol has been found to be a satisfactory therapeutic substitute for morphine. It appears to possess the following clinical advantages over morphine: Its spasmolytic action makes it ideal for the relief of conditions due to smooth muscle spasm, in which morphine is pharmacologically contraindicated. Its rapid dissipation tends to offset undesirable cumulative effects such as respiratory depression and urinary retention. Prolonged use of Demerol may lead to the development of habituation, but it appears to possess a lesser liability than morphine for the development of physical dependence. In order to avoid the dangers of habituation, physical dependence and undue cerebral irritability, amounts greater than 150 mg. every three hours should not be given. . . . If this amount will not meet the clinical need, increasing the dose and shortening the interval not only may not have any additional therapeutic value but is apt to result in serious consequences." 35 references.

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NEWHOUSE, L. R., AND LOZNER, E. L.: *Practical Considerations in the Therapeutic Use of Blood Derivatives*. *New England J. Med.* 228: 671-674 (May 27) 1943.

"Albumin should not be considered a substitute for plasma, and certainly not for whole blood. It represents a relatively stable concentrated solution of that fraction of the plasma proteins mainly responsible for the maintenance of the colloid osmotic pressure of the blood, and its chief advantages exist where storage or transportation space is at a premium. . . . The chief dangers in the use of human serum albumin arise from the facts that it represents but one of the serum proteins, and that it is extremely hypertonic and supplies practically none of the fluid that may be needed in the treatment of traumatic shock, burns or hemorrhage. . . . In burns, citrated plasma should follow albumin as soon as possible, and arrangements should be made to transport the patient promptly to an area where this is feasible or to transport plasma to the patient. In traumatic shock, albumin must be considered solely as an emergency first-aid measure. . . . It is quite evident, from the experience acquired to date, that plasma, when prepared by a closed method with scrupulously aseptic technic, may be preserved in liquid state at room temperature in a medical establishment in the temperate zone for at least as long as fourteen months. . . . When liquid plasma, prepared by the same closed and scrupulous technic, is frozen within twenty-four hours after preparation at a temperature below -20° C., it may be preserved indefinitely, if stored below -15° C. . . . Thawing must be done in a water bath at body temperature (37° C.) with occasional shaking, and should not take longer than thirty minutes per bottle of plasma. . . . Once accidental thawing has occurred,