

cyclopropane has been used. This is usually a temporary affair and the blood pressure quickly rises when the patient is put into Trendelenburg position. . . . In treating shock it is important to try to get rid of the cause if possible, that is, stopping the source of bleeding, correcting improper splinting, etc. . . . The intravenous administration of whole blood is the best treatment in case of shock due to hemorrhage; next best is blood plasma or serum. If these are not immediately available, an intravenous injection of a 5 per cent acacia solution or physiologic saline may be given temporarily. . . . One has to give enough blood until the patient's blood pressure rises to over 100 mm. of mercury and his general condition is improved. . . . Plasma and serum of course have the advantage of not having to be cross-matched with the patient's blood. . . . The blood pressure gives the earliest, simplest, and most accurate indication of impending shock." 9 references.

J. C. M. C.

HENNIG, G. C.: *Reactivity of the Skin: Effect of Anesthesia and Shock on the Histamine and Allergic Responses*. U. S. Nav. M. Bull. 41: 698-707 (May) 1943.

"Human plasma and albumin are now being prepared in large amounts for the treatment of shock and burns by the military forces. However, there is great need for still larger amounts of some blood substitute of other than human origin which can be made readily available. For this purpose it has been proposed to substitute bovine albumin as a more abundant and more available source for meeting these needs. The question of the antigenicity of these foreign proteins naturally raises a practical problem. The importance of this question becomes even greater when it is realized that

many patients will need repeated large amounts of these foreign proteins. It has been maintained that anesthesia protects against anaphylaxis, and it is possible that patients in severe shock do not react as strongly to reinjection of antigenic substances as do normals. It was the purpose of this study to ascertain with greater certainty whether patients under anesthesia or in shock who might be subjects for treatment with a protein blood substitute show any diminution in their reactivity as measured by their skin reaction to histamine or to natural allergens. . . .

"A histamine stock solution, supplied in 1 cc. ampules in a 1:1,000 dilution, was employed. This stock solution was diluted with physiological saline into three dilutions which were used for our series of tests. These dilutions were: 1:100,000, 1:1,000,000, and 1:10,000,000. Intradermal injections of 0.1 cc. of these particular dilutions gave skin flares which seemed to us to reach the smallest and largest size which could be measured with any degree of accuracy. . . . Dust, ragweed, timothy, peanut oil, codfish, and horse-dander solutions were used to test for natural sensitivity preoperatively. . . . With the dilutions used, the wheal did not enlarge to any great extent in most of the cases, nor did pseudopods form. For this reason the flare was measured rather than the wheal. . . . The histamine flare was found to be smaller in those patients who had received ether or nitrous-oxide anesthesia for thirty minutes or longer. Intravenous pentothal anesthesia did not affect the size of the flare when used for 30 minutes. Spinal anesthesia likewise had no effect. Cases of shock uncomplicated by anesthesia showed some diminution in the size of the histamine flare, and those patients in whom ether anesthesia and shock were combined showed the greatest decrease in the size of the histamine

flares and the lowest absolute values. The skin flares from intradermal injections of natural allergens also showed a decrease in size under ether anesthesia and in cases of shock. In no case, however, did a strongly positive reaction become negative under anesthesia or shock." 10 references.

J. C. M. C.

MORRISON, L. M.: *A Study of Hepatic Toxicity with Seven Currently Used Anesthetics*. Rev. Gastroenterol. 10: 171-182 (May-June) 1943.

"A comparative study was made of the toxic effects on the liver of seven currently used anesthetics: spinal injections, ether, nitrous oxide, cyclopropane, avertin (administered rectally), evipan (administered intravenously), and chloroform. The patients were grouped as follows: (1) spinal anesthetic in the presence of proved liver disease; (2) spinal anesthetic in patients with proved normal livers; (3) ether in combination, in the presence of proved liver disease; (4) ether in combination, in patients with proved normal livers; (5) cyclopropane; (6) avertin; (7) evipan; (8) nitrous oxide and oxygen; (9) chloroform. . . . In the first phase of our investigation, the postoperative liver function following ether and spinal anesthesia was evaluated comparatively in the presence of liver disease and in patients with normal livers. This study was based on the bile-salt concentration in surgical-drainage bile and in the urine. . . .

"Thirteen groups of selected cases were studied daily postoperatively. . . . In abdominal surgery, in the presence of both the normal and the pathological liver, spinal anesthesia places a considerably smaller toxic burden on the liver than does ether anesthesia. In cases of biliary-tract surgery, the rate of recovery of the pathological livers as well as of the normal livers was considerably more

rapid after spinal anesthesia than after ether anesthesia. In the presence of liver disease, the degree of hepatic suppression or insufficiency following spinal anesthesia was very much less during the first eleven postoperative days than that following ether anesthesia. Sodium evipan, cyclopropane and nitrous-oxide anesthesia had no discernible postoperative toxic effects on the liver. Rectal avertin anesthesia caused postoperative hepatic dysfunction for twenty-four hours. Chloroform anesthesia as used in obstetrics imposed a postpartum toxic liver dysfunction of twenty-four hours' duration." 34 references.

J. C. M. C.

CHIVERS, ELVA M.: *Anaesthetic Explosion Due to Static Electricity*. Lancet 1: 527 (April 24) 1943.

"At about 11 a.m. on July 10, 1942, an anaesthetic explosion occurred in the gynaecological theatre of the West Middlesex County Hospital. The anaesthetic apparatus in use at the time was a Boyle's machine consisting of a table with nitrous-oxide, oxygen and carbon-dioxide cylinders attached, a dry flowmeter, chloroform and ether bottles, and a Magill unit. No CO<sub>2</sub>-absorber was attached to this machine. One operation had been performed under a general anaesthetic, and the second patient, a middle-aged woman, was about to undergo a minor gynaecological operation. After a quiet induction lasting about five minutes, during which she was given N<sub>2</sub>O-O<sub>2</sub> ether mixture, she was wheeled into the theatre together with the Boyle's machine; the face mask was kept on the whole time. She was then lifted on to the operating table, and the stretcher trolley was wheeled out of the theatre. After about two minutes, during which the anaesthetic mixture had not been changed, and without the slightest indication of anything being