ume of fluid displaced may be calculated on the basis of transfer out of the circulation of 75 cc. of plasma and 75 cc. of physiologic saline in forty-eight hours for each per cent of surface area burned. For more extensive burns, the fluid lost may be computed as 10 per cent of the body weight. Besides this loss into the extracellular space, fluid is lost from the burned surface. The former is replaced by plasma, the latter by physiologic salt solution. In addition to this replacement one must keep up the fluid requirements for normal daily physiology.

Studies show that after forty-eight hours the fluid loss is pretty well decreased. The rate of replacement should parallel the expected rate loss, so that 50 per cent is administered in 12 hours, 75 per cent by the end of twenty-four hours, 87 per cent by the end of thirty-six hours, and the total by forty-eight hours.

Fluid replacement after forty-eight hours should be only sufficient to keep the urinary output at 40 to 80 cc. per hour. In the presence of oliguria and anuria, perform the “water tolerance” test described by Cope and Moore to determine whether it is due to oligemia or renal damage.

The chronic anemia that develops is due to chronic blood loss from granulating wounds, bone marrow depression, interference with absorption or utilization of iron, and is treated by repeated whole blood transfusions.

Summary: Blood and plasma are indispensable agents in shock. Whole blood is lost in traumatic shock, and it should be used in replacement. Plasma is lost in burns and is indicated in replacement. A careful check must be kept on fluid replacement. Whole blood is needed from the chronic anemia of burns. Administration of blood and plasma is not without hazards and must be used with great care and judgment.

Adequate graphs further help to prove the authors’ points in their article. 6 references.

J. R. H.


The purpose of this paper is to describe the use of curare in patients premedicated with large doses of morphine and scopolamine. The study is based on an evaluation of 446 cases; one hundred of these have been subjected to analysis.

The patients were premedicated in the manner described by Metz in 1936. Two and one-fourth hours before the scheduled time for surgery, the first hypodermic injection of morphine and scopolamine was given. The dosage was morphine 16 mg. and scopolamine 0.65 mg. for normal adults of good vigor. The first dose was reduced if the patient was undernourished, debilitated or over sixty years of age. The second hypodermic was given forty-five minutes later. This consisted of morphine 16 mg. and scopolamine 0.65 mg. depending on the patient’s vigor. The third dose was usually morphine 10 mg. and scopolamine 0.5 mg. administered forty-five minutes after the second dose, but was omitted if the patient was unconscious and did not respond to stimulation. In all cases the anesthetist was notified before the third hypodermic injection.

Routinely a 20 unit dose of curare was given intravenously immediately before the anesthetic mask was placed on the patient’s face. This caused sufficient muscular relaxation to allow a quiet induction with ethylene or nitrous oxide and permit adequate oxy-
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genation. For operations requiring deep muscular relaxation, the primary dose was followed by 40 units five minutes before the anticipated time of the peritoneal incision. When relaxation was insufficient, an additional 20 units were infused and occasionally another dose was required for closure of the peritoneum.

In all cases studied the following technic of administration of the inhalation agent was found optimal. The induction was accomplished with three liters per minute flow of ethylene or nitrous oxide and one liter per minute of oxygen. After approximately three minutes the anesthetic agent was reduced to one liter per minute and this 50-50 concentration, assuring adequate oxygenation, was continued throughout the surgical procedure. 1 reference.

J. B. G.


This discussion includes a technic for completing glossopharyngeal nerve block safely and effectively.

The patient is placed in the supine position and the head turned toward the opposite side to about 45° with the sagittal plane of the body. The tip of the mastoid bone is then identified and marked with a skin pencil. The angle of the mandible is also located and marked. A line is drawn connecting these points and is then bisected. A skin wheal is raised at the midpoint of the line joining the mastoid tip and the angle of the mandible. Contact with the styloid process is effected by inserting a 5 cm. five caliber needle through the wheal in a direction vertical to the skin. After the styloid process is encountered at a depth varying from 2 to 4 cm. medial to the skin surface, the needle is reinserted in a manner which permits the point to pass 0.5 cm. deeper and posterior to the bony styloid. The needle point then lies immediately adjacent to the glossopharyngeal nerve and injection is completed very slowly after careful aspiration. A total of 4 to 8 cc. of a 1.5 per cent procaine solution on each side will provide adequate anesthesia of the posterior third of the tongue for approximately seventy-five minutes.

Case reports are presented which illustrate the use of glossopharyngeal block in anesthetizing the base of the tongue for operative intervention and in providing an accurate diagnostic measure in the selection of patients for surgical section of the ninth cranial nerve. 1 reference.

J. B. G.


"... I hope to defend the proposition that the four agents, nitrous oxide, ether, chloroform, and procaine, with relatively simple apparatus, in the hands of any conscientious and competent physician, can provide safe, pleasant, and adequate anesthesia for the majority of the operations in modern surgical practice.

"... It is my desire to emphasize the importance of a thorough medical training for the administrator of anesthetics and simplicity in method of administration, unless or until the status of true specialism is achieved.

"Since all anesthetic agents may and frequently do cause serious depression of the respiratory and other functions, the problems of modern anesthesia grow ever more complicated. To determine the cause and the proper treatment of a condition arising after the simultaneous administration of an opiate and a barbiturate, followed by a