

Unfavorable reactions include pyrogenic reactions from the cellulose, leukopenia, and thrombocytopenia, hemolysis, changes in blood pressure, hemorrhage, postdialytic oliguria, and overloading with sodium from the rinsing fluid. Indications for the use of this instrument include: acute tubular nephrosis, hemoglobinuric and myohemoglobinuric nephrosis (the most frequent cause of free hemoglobin is an incompatible blood transfusion), nephrosis owing to specific renal toxins, acute glomerulonephritis, acute obstruction of the ureters, acute pancreatitis, the hepatorenal syndrome, acute renal failure supervening on existing renal disease, chronic uremia, intractable edema, and intoxications with primary nephrotoxic chemicals. (*Kolff, W. J.: Artificial Kidney, Circulation 15: 285 (Feb.) 1957.*)

**ARTIFICIAL KIDNEY** The authors give a description of their apparatus and an account of their experience based on 300 applications of dialysis. In a group of 62 postabortion patients treated conservatively, the mortality rate was 70 per cent in contrast to the mortality rate for a group of 62 postabortion patients treated with the artificial kidney which was 8 per cent. The mortality rate in anuria following transfusions of incompatible blood (19 cases) was 5 per cent as compared to the mortality rate of about 65 per cent reported by other authors who had not used the artificial kidney. The indications for dialysis are acute renal insufficiency in cases in which concentrations of urea are more than 350 mg. per 100 ml. of blood or in which severe electrolyte disturbances exist. Often one application of dialysis will produce a rapid convalescence, but sometimes two, three or four applications may be necessary. In cases of chronic renal insufficiency, the indications for dialysis should be limited to acute exacerbations of the disease or to the preparation of patients who will undergo surgical procedures for the improvement of renal function. (*Hamburger, J., and Richet, G.: Artificial Kidney, Bull. Acad. nat. méd. 141: 12, 1957.*)

**PERORAL ENDOSCOPY** For laryngoscopy, light general anesthesia (sodium Pentothal-nitrous oxide-Anectine) is being superimposed upon an already satisfactory topical anesthesia. Topical anesthesia plus

endotracheal anesthesia is being employed for esophagoscopy. (*Eversole, V. H.: Anesthesia for Peroral Endoscopy, Surg. Clin. North America (June) 1956, p. 641.*)

**TETANUS THERAPY** The "old therapeutic regimen" (sedation, antitetanus serum) carried a mortality of 27.2 per cent; addition of intravenous mephenesin and antibiotics reduced it to 18.2 per cent; additional drug-induced hibernation raised it to 52.3 per cent. (*Veroness, R.: Clinical Observations on 712 Cases of Tetanus Subject to Four Different Methods of Treatment, Am. J. M. Sc. 232: 629 (Dec.) 1956.*)

**MAXILLO-FACIAL INJURIES** Tracheotomy is almost invariably indicated in the severe injury, if not for the restoration of the airway, then certainly for the route of the anesthesia. Although local anesthesia alleviates many of the airway problems, it is not suitable in most instances. Of 1,305 injured patients treated over a five-year period, local anesthesia was administered to 885, general anesthesia to 283, and no anesthesia to 137. (*Walden, R. H., and Bromberg, B. E.: Recent Advances in Therapy in Maxillo-facial Bony Injuries in Over 1,000 Cases, Am. J. Surg. 93: 508 (April) 1957.*)

**SPARE PARTS** The technical aspects of using homografts are not insurmountable except for the barrier of the immunologic reaction of the host. Except in single ovum twins, the use of blood, bone, cartilage, blood vessels, corneas, fascia, and skin is a mechanical or physiologic aid to tide over an emergency. The solution to the problem of homograft survival rests on active acquired tolerance to tissues of another individual. This can occur in fetal life producing a chimera. In an adult the active immunologic response to antigen may be reduced or paralyzed by radiation or chemotherapy. Further investigations with improvements in techniques may make possible successful homografts in man. (*Ferrebee, J. W., and Merrill, J. P.: Spare Parts; Review with a Forward Look, Surgery 41: 503 (March) 1957.*)

**BLOOD TRANSFUSION REACTIONS** To avoid allergic reactions, it is recommended that fasting donors with no

allergic history be used. A review of the literature reveals an incidence of 0.32 to 3.6 per cent allergic reactions. Twenty milligrams of Chlor-trimeton was administered in the blood to 46 allergic patients receiving 108 pints of blood with no subsequent reaction. When these same 46 patients were given 109 pints of blood without antihistamine there was a reaction rate of 12 per cent. (*Hoffmann C. R.: Allergic Reactions to Blood Transfusion; Their Prevention with Injectable Chlor-Trimeton, Surgery 41: 491 (March) 1957.*)

### SURGERY FOR TUBERCULOSIS

In 100 patients operated upon for pulmonary tuberculosis, 23 patients had 28 complications. The most frequent postoperative complication was some problem in lung expansion. It was felt that with greater vigilance complications would not have occurred in 8 of the 23. One patient in this series died, and the others obtained a satisfactory end result. (*Thomas, D. E.: Immediate Postoperative Complications of Thoracic Surgery in Pulmonary Tuberculosis, J. Thoracic Surg. 33: 341 (March) 1957.*)

**CARDIAC SURGERY** The criteria for operability in individual congenital and acquired heart diseases are briefly reviewed. The problem of identifying the culpable defects and their surgical correction is emphasized. Diagnostic laboratory procedures are compared to fiery gifts which may well burn the fingers of the practitioner before he learns to use the gifts correctly. (*Burchell, H. B.: Physiologic Considerations and Clinical Indications for Cardiac Surgery, Bull. New York Acad. Med. 33: 263 (April) 1957.*)

**ARTIFICIAL OXYGENATOR** A "simple and safe" oxygenator has been used on patients ranging in age from 8 weeks to 37 years, allowing a by-pass of the heart from 6 to 70 minutes. The simplicity and safety of the open methods and the greater benefits from direct vision reparative procedures lead to the abandonment of closed or blind techniques for repair of virtually all congenital and acquired diseases of the cardiac septa and valves. (*DeWalt, R. S., and others: Simple, Expendable, Artificial*

*Oxygenator for Open Heart Surgery, Surg. Clin. North America (Oct.) 1956, p. 1025.*)

**HYPOTHERMIA** Nine of 10 normothermic dogs with occlusion of the abdominal aorta and inferior vena cava for one hour died. Intraperitoneal cooling of 10 dogs by irrigating the peritoneum with 8 to 10 liters of saline at 2 to 10 C. resulted in liver and intestinal temperatures below 25 C. Esophageal temperature gradually fell to 30 or 32 C. by the end of one hour. When warm saline was poured into the peritoneum for rewarming, all animals survived. This technique is suggested for prolonged and careful hepatic surgery. (*Huggins, C. E., and Carter, E. L.: Partial Hepatectomy Employing Differential Hypothermia, A. M. A. Arch. Surg. 74: 189 (Feb.) 1957.*)

**ECG IN HIBERNATION** Serial electrocardiograms taken on 10 patients undergoing artificial hibernation revealed similar changes in all cases. All patients exhibited a considerably prolonged P-R, QRS and Q-T intervals. No cases of serious cardiac arrhythmias occurred. (*Villamil, A., and others: Electrocardiographic Changes in Artificial Hibernation, Am. Heart J. 53: 365 (March) 1957.*)

**HYPOTHERMIA** Hypothermia is recommended for certain vascular and neurosurgical procedures, where it makes prolonged regional ischemia tolerable, as well as in cyanotic heart disease or in patients with severe tachycardia, where the operative risk of standard procedures can be diminished. By permitting relatively safe total circulatory occlusion for periods up to eight minutes, general hypothermia in the range of 28 to 30 C. has become an established technique for direct vision intracardiac procedures. (*Swan, H.: Hypothermia for General and Cardiac Surgery, Surg. Clin. North America (Aug.) 1956, p. 1009.*)

**HYPOTHERMIA** Many investigators in the field of experimental hemorrhagic shock have noted indirectly that the mortality rates were lower in animals showing various degrees of hypothermia. The authors studied this contention under control