poxia. (*Shev, E. E., and Robinson, S. J.: Electroencephalographic Findings Associated with Congenital Heart Disease, Electroencephalog. & Clin. Neurophysiol. 10: 253 (May) 1958.*)

XYLOCAINE Xylocaine is a member of a new group of anaesthetic agents. Its active principle gramine was isolated from grasses growing in central Asia. In 1946 xylocaine was synthesized by the Swedish chemists Lofgren and Lundquist. In the body it undergoes slow decomposition, mainly in the liver. It shows a greater affinity towards sensory nerve fibers than to motor or sympathetic nerves. Xylocaine lowers the arterial pressure and is an effective local anesthetic. Its main advantage over procaine is that anesthesia commences sooner and lasts longer. The maximum permissible dose of xylocaine is 0.2 Gm. In case of overdose oxygen should be administered and artificial respiration performed. To increase the arterial pressure, intravenous ephedrine is advised. The use of xylocaine as a local anesthetic by the method of creeping infiltration produces excellent analgesia. (*Bantsekina, M. M., and Kudryavtseva, A. M.: Anesthetic Properties of Xylocaine, Eksper. Khir. 5: 32, 1956.*)

SUBARACHNOID BLOCK Careful selection of patients with intractable pain, rigid technique of needle placement and neurological evaluation before and after blocks make subarachnoid alcohol blocks useful in malignant disease. Repeat blocks are necessary if the first block fails to eliminate the pain, if the pain is bilateral or if the block wears off. It is especially useful in patients with a short life expectancy and should be supplemented with tranquilizers or sedatives. (*Perese, D.: Subarachnoid Alcohol Block in Management of Pain of Malignant Disease, A. M. A. Arch. of Surg. 76: 347 (Mar.) 1958.*)

HEPARINIZED BLOOD The severe and occasionally fatal shock syndrome observed when citrated blood is used for exchange transfusion does not occur when heparinized blood is used straight from the donor. (*Valentine, G. H.: Exchange Transfusion in Newborn Using Heparinized Blood, Canad. M. A. J. 78: 977 (June 15) 1958.*)

OVERTRANSFUSION Circulatory overloading is now probably the most common cause of death from blood transfusion when proper methods are employed to prevent incompatibilities. Overtransfusion can be clinically noted by the appearance within an hour of dyspnea, orthopnea, intense cyanosis, blood-tinged frothy sputum, venous engorgement, sibilant and sonorous râles and often acute auricular fibrillation. Prophylaxis is the best treatment. Active treatment should be prompt and consist of (1) use of extremity tourniquets, (2) phlebotomy, (3) positive pressure oxygen therapy, (4) restriction of fluid intake. (*Downs, J. W.: Problem of Overtransfusion in Massive Hemorrhage, Ann. Surg. 148: 73 (July) 1958.*)

MASSIVE AIR EMBOLISM Massive air embolism (approximately 300 cc. within a few seconds) occurred in a patient momentarily left unattended during the administration of blood under positive pressure. Cardiac and respiratory arrest occurred within 15 seconds. Essential steps in the treatment of this catastrophe are: (1) Withdraw the infusion needle and discontinue the source of the air embolism. (2) Place the patient in Trendelenburg position to prevent air from entering the cerebral circulation in the event that arterial embolism may have occurred. (3) If time permits, place the patient in the left lateral position so that the air block (of the pulmonary valve) may be released. (4) If cardiac arrest occurs or the air embolism is too massive for the previous maneuver to succeed, perform emergency thoracotomy with needle aspiration of the right ventricle followed by cardiac massage. (5) Maintain a clear airway and provide effective artificial respiration with oxygen. (*Shires, T., and O'Banion, J.: Successful Treatment of Massive Air Embolism Producing Cardiac Arrest, J. A. M. A. 167: 1483 (July 19) 1958.*)

TRANSFUSION REACTION A total of 191 transfusions of 15–20 ml. of incompatible blood was administered. To 123 of these a ganglion-blocking agent was

added. 103 transfusions were preceded by intravenous administration of 200 mg. tetamon (tetraethylammonium, a synthetic ganglion-blocking agent) and of these 41 showed no reaction whatsoever, 61 showed a reaction much milder than could have been expected, and in one instance the reaction was marked. Twenty other transfusions were preceded by administration of 50 mg. of hexathonid (hexamethonium iodide, a more active ganglion-blocking agent); in 12 cases no reaction was observed and in the remaining 8 cases it was mild. This activity of ganglion-blocking agents shows that excessive production of acetylcholine is one of the main pathogenetic factors in the production of transfusion reactions. (*Novachenko, N. N.: New Methods of Prevention of Transfusion Reactions Based on Their Pathogenesis, Vrac. Delo 8: 873, 1956.*)

TRANSFUSION REACTIONS The serum levels of total protein and electrophoretic protein fractions were estimated (a) in 24 patients who had nonhemolytic reactions to blood transfusion; (b) in 18 healthy blood donors; and (c) in 34 patients who had taken blood transfusion well. Subnormal total protein levels were found most often in the patients who had reacted badly to blood transfusions. Where there is no urgency, the patient's serum proteins should be determined prior to transfusion. When the serum protein, and especially serum albumin, is low, the patient should be given washed erythrocytes instead of whole blood. (*Polak, A., and Fiser-Herman, M.: Serum-Proteins in Patients with Non-Haemolytic Transfusion Reactions, Lancet 1: 1042, (May 17) 1958.*)

TRANSFUSION When faced with serious blood loss which cannot be replaced rapidly enough with intravenous transfusions, the use of intra-aortic transfusions may be lifesaving. Displacement of the intestinal tract onto the abdominal wall and use of a specially curved needle facilitate entrance into the aorta. Five cases are presented in which intra-aortic transfusion preserved life. (*Rive, H. L., and others: Intra-Aortic Transfusion, Obst. & Gynec. 11: 537 (May) 1958.*)

PARENTERAL FLUID DOSAGE A rule of thumb based on weight alone (rather than on body surface area), when combined with appraisal of daily weights and clinical appearance, including skin turgor and frequency and volume of urination, is sufficiently accurate. For infants less than 1 year of age, 60 ± 15 ml. of water per pound (132 ± 33 ml. per kilogram) is given each 24 hrs.; for children 1 to 5 years, 50 ± 15 ml. per pound (110 ± 33 ml. per kilogram) is given; for children above 5 years, approximately 40 ± 15 ml. per pound (88 ± 33 ml. per kilogram) is given. In the presence of normal renal function, isotonic sodium chloride up to one-third of the total daily fluids is well tolerated; the remaining volume consists of 5 or 10 per cent dextrose in water. (*Oliver, W. J., and others: Lack of Scientific Validity of Body Surface as Basis for Parenteral Fluid Dosage, J. A. M. A. 167: 1211 (July 5) 1958.*)

TETANUS Two identical groups of patients were treated similarly, except that one received chlorpromazine and the other phenobarbital. There was no statistically significant difference in the outcome of the treatments of the two groups. However, chlorpromazine was easier to manage than barbiturates, because it controlled the tetanus convulsions without causing loss of consciousness or of clinically noticeably depressed respiration. (*Laurence, D. R., and others: Clinical Trial of Chlorpromazine Against Barbiturates in Tetanus, Lancet 1: 987 (May 10) 1958.*)

NEUROMUSCULAR BLOCK Gastrocnemius response to sciatic stimulation was measured in anesthetized cats. The response to suxamethonium and tubocurarine differed between symmetrical muscles. Increased rates of stimulation and fatigue both increased sensitivity to blocking agents. During recovery from suxamethonium block some muscles showed a transitory failure to react to each stimulus. (*Wislicki, L.: Effects of Rate of Stimulation and of Fatigue on Response to Neuromuscular Blocking Agents, Brit. J. Pharmacol. 13: 138 (June) 1958.*)

NEUROMUSCULAR BLOCK Experimental work with cats showed that hypo-