

indicated, the primary consideration is to maintain or restore the oxygen-carrying capacity of the patient's blood. Obviously, packed erythrocytes most logically fulfill this requirement. In addition, the utilization of packed erythrocytes, in preference to whole blood, avoids the potential deleterious consequences which may result from donor leukocyte, platelet and plasma administration. In the author's opinion, it is likely that more than 80 per cent of the transfusion needs in this country can and should be met with packed erythrocytes. (*Chaplin, H. C.: Packed Red Blood Cells, New Engl. J. Med. 281: 364 (Aug.) 1969.*)

SOVIET BLOOD SUBSTITUTES Researchers in the Soviet Union have developed a wide variety of blood substitutes for use in shock treatment, detoxification, and parenteral feeding. Polyglucine deserves special attention because it is more effective in treating shock and acute blood loss than all other blood substitutes. Polyvinylpyrrolidone of low molecular weight is one of the better preparations. Its detoxifying properties are especially useful for treatment of burns and radiation sickness. For parenteral feeding, hydrolysin L-103, aminopeptide and casein protein hydrolysate are used with considerable success. Fibrinolytic blood from cadavers has proved useful and reliable, but its work is limited to hospitals with large numbers of cases of sudden death in which the cadavers are received shortly after demise. An attempt is being made to find a form of polyvinylpyrrolidone that retains the osmotic effect of the medium-molecular-weight compound while gaining the more rapid and complete excretion of the low-molecular-weight compound. The possibility of using blood from bodies where death has been due to infectious disease as a means of immunotherapy is being considered. The great need for an artificial blood substitute with oxygen-transfer ability is recognized, but there is no research on oxygen-carrying fluorocarbons similar to that being conducted in the United States. Apparently no work on hydroxyethyl starch as a blood substitute is being done. (*Kiel, F. W.: Blood Substitutes in the Soviet Union, Transfusion 9: 169 (July) 1969.*)

CENTRAL VENOUS PRESSURE The preferred site for aseptic venous cutdown is the basilic vein at the antecubital fossa. Catheterization of the subclavian vein is not indicated (unless all other sites are unsatisfactory) because of associated pneumothorax, hydrothorax, hemothorax, and even death, which has occurred twice during the past year. Isotonic saline solution is used with central venous catheters since glucose-and-water solutions usually lead to thrombus formation within the catheters. Methylene blue solution, one ml, and heparin, 500 units, are added to each 500 ml of intravenous saline solution. Complications include sepsis, embolus, injury to peripheral arteries and nerves, arrhythmias, perforation of the myocardium, and excessive administration of intravenous fluids. Changes in central venous pressure (CVP) and relation of these changes to other physiologic variables are more important than any individual pressure reading. Two significant "pitfalls" in CVP are the lack of perfect correlation of CVP with blood volume and the lag in rise of CVP in acute left heart failure. (*Hill, G. J., II: Central Venous Pressure Technique, Surg. Clin. N. Amer. 49: 1351 (Dec.) 1969.*)

BLOOD COAGULATION Disturbances of blood coagulation postoperatively generally can be traced to excessive heparin in the blood or to a consumption coagulopathy. The latter is associated primarily with severe cyanotic heart disease and prolonged operations with persistent hypotension. Furthermore, damage to platelets may occur during pump perfusion. It is advisable to use protamine in minimal amounts. Hyperheparinemia needs correction only if it causes marked bleeding. High heparin levels serve as the best protection against consumption coagulopathy. Prophylactic use of aminocaproic acid may reduce postoperative blood loss slightly but it is contraindicated when consumption coagulopathy threatens. Trasylol is preferable if antifibrinolytic therapy appears indicated. (*Encke, A.: Blood Coagulation and Cardiopulmonary By-pass, Thoraxchirurgie 17: 414 (Oct.) 1969.*)

DEXTRAN Low-molecular-weight dextran (LMDX) increased cardiac output (CO) but