

removal. One possible mechanism of excessive fibrinogen removal is by activation of fibrinolysins. Profibrinolysin can be activated to fibrinolysin by fibrinokinase, a possible cause of fibrinolytic activity during surgery. Because the gravid uterus contains large amounts of fibrinokinase, effective concentrations may be released from the damaged conceptus into the maternal circulation and initiate fibrinogenolysis. However, although fibrinolysin may attack both fibrin and fibrinogen in purified systems, the antifibrinolysin mechanism in the blood prevents attack on dissolved fibrinogen but not on coagulated fibrin. Thus the fibrinolysin-antifibrinolysin system appears to be well adapted to removal of fibrin formed during fibrination but has a physiological mechanism which minimizes fibrinogenolysis. Another possible mechanism of fibrinogen removal is fibrination-defibrination. During fibrination, fibrin is formed in the blood. Fibrin formation activates fibrinolysin. Hence the blood becomes fibrinopenic but remains liquid and continues to circulate. The depletion of coagulation and thrombus-forming mechanisms may be so severe that a hemorrhagic tendency results. Outstanding examples occur during abruptio placentae, delivery of a hydatid mole, and abortion of late pregnancy. (Schneider, C. L.: *Etiology of Fibrinopenia: Fibrination Defibrination*, *Ann. New York Acad. Sc.* 75: 634 (Jan. 9) 1959.)

**BLOOD CONTAINERS** Plastic containers (polyvinyl chloride) made of certain basic plastics or plasticizers release leachable substances exerting a toxic effect on red blood cells shortening their in vitro and in vivo survival. Red blood cells are well preserved in silicone coated glass, but uncoated glass also releases a toxic material. Presence of liquid-air interfaces or the degree of wettability of the container wall have no effect on the degree of red blood cell damage. (Strumia, M. M., Colwell, S. S., and Dugan, A.: *Preservation of Blood for Transfusion. III. Mechanism of Action of Containers on Red Blood Cells*, *J. Lab. & Clin. Med.* 53: 106 (Jan.) 1959.)

**PLASTIC TRANSFUSION SETS** A comparison of a disposable plastic transfusion set

with the standard rubber and glass reusable transfusion sets has revealed that the plastic sets reduce the incidence of thrombophlebitis by approximately 50 per cent. It was found impossible to guarantee that the interior of a reusable set is free of pyrogens. The incidence of air embolism and the risk of infection has been reduced materially, since the advent of the plastic disposable set. (Jenkins, W. J., and others: *Experiences with Disposable Plastic Transfusion-Giving Set*, *Lancet* 1: 139 (Jan. 17) 1959.)

**BANKED BLOOD** Stored blood, regardless of the method of preservation, undergoes certain biochemical alterations with the passage of time. To investigate such changes, blood was drawn from 27 normal male volunteers and divided into three groups. In one group, blood was stored in ACD solution in silicone coated vacuum bottles; in the second group in the same solution and stored in plastic bags; and, in the third group run through a cation-exchange resin and then stored in a plastic container. In all three groups, potassium levels continued to rise for 21 days, with levels of about 20 mEq./l. at that time. Ammonium levels responded similarly. Passage of the blood through resin columns reduced the potassium and ammonium to or below normal levels. (Schechter, D. C., Nealon, T. F., Jr., and Gibbon, J. H., Jr.: *Removal of Excessive Potassium and Ammonium from Bank Blood Prior to Transfusion*, *Surg. Gynec. & Obst.* 108: 1 (Jan.) 1959.)

**TRANSFUSION REACTIONS** Blood transfusions were given in 81,392 instances at the Kings County Hospital Center between 1952 and 1957. Thirty patients were transfused with incompatible blood. Eighteen of these patients had a hemolytic transfusion reaction for an incidence of 1:4,520. Seven of the 18 patients died. In 5, the appearance of a coagulation defect contributed significantly to death. The conservative management of acute renal failure produced the best results. (Binder, L. S., Ginsberg, V., and Harmel, M. H.: *Six Year Study of Incompatible Blood Transfusions*, *Surg. Gynec. & Obst.* 108: 19 (Jan.) 1959.)