

and returned to normal within twenty-four hours.

"11. In acute experimental hemorrhage in voluntary human subjects, the replacement of two-thirds of the volume of blood removed with a 6 per cent gelatin solution corrected changes in blood pressure, venous pressure, pulse, stroke volume, and cardiac output secondary to blood loss.

"12. Gelatin solutions are effective in the treatment of at least the early phases of hemorrhagic shock.

"13. In certain types of edema there is a diuresis following the administration of gelatin solutions which is accompanied by clinical improvement.

"14. Further studies on the value of gelatin in shock, burns, and hypoproteinemic states are clearly warranted.

"15. Histologic examination of the tissues of eight patients who died of their respective diseases at intervals varying from three hours to six weeks after receiving gelatin revealed no evidence of gelatin storage in the tissues or of irreversible tissue change."

M. L. B.

HOXWORTH, PAUL I.: *Blood and Plasma Transfusion Service*. *Surgery* 15: 832-838 (May) 1944.

The author describes the blood transfusion service which was developed by the department of surgery of the University of Cincinnati and the Cincinnati General Hospital. The service was begun Dec. 10, 1938 at the Cincinnati General Hospital and has increased in size so that it now takes all the blood for the various private hospitals in the city. All plasma is prepared in this central location.

"Donors are received through regularly scheduled half day periods each week." All blood is donated free in return for blood or plasma received at the various hospitals. Each hospital is responsible for its credit or debit in the bank.

There was a progressive increase of bank transactions from 2,637 units for the first year to 5,780 units for 1943. This increase occurred without any attempt at promotion of the service.

Plasma was prepared in the dried and frozen state. Red blood cell preparations were made in saline glucose suspensions or just as red cells to be diluted by the user. The red cell preparations are kept in a refrigerator at 4 to 6° C. and kept only five days.

All blood is drawn by a physician who is paid a small fee by the participating hospitals. No patient in the community is refused blood or plasma and all participating hospitals do have an adequate supply of blood and plasma. The patients supply blood donors from their friends or relatives when they are unable to pay for the blood or plasma. The author does not state, but implies, that the replacement of blood is considered more desirable.

M. L. B.

WHITBY, LIONEL: *Transfusion in Peace and War*. *Lancet* 1: 1-4 (Jan. 6) 1945.

"Transfusion work in war is essentially of an emergency nature. All possible short cuts to eliminate error and lengthy procedures are necessarily employed. Only a fraction of peacetime practice falls into this category much of the work is calculated and deliberate, with ample time and facilities for fine determinations. On the battlefield, for example, the only blood used is that obtained from the universal donor; homologous transfusion is not even contemplated, at least in forward areas. Yet homologous transfusion, with all compatibilities satisfied, provides the perfect tissue graft and is the therapeutic ideal in many medical diseases. In war the main requirement is restoration of blood-volume and the treatment of the simple anaemia

mia of haemorrhage. For this, stored blood is eminently suitable. . . . In war the commonest recipient is the fit young soldier whose cardiac musculature was in perfect order before his wounding. To him, large volumes need to be and can be administered at fast rate without fear of overloading the circulation or producing pulmonary oedema. Indeed almost the only contra-indications to enthusiastic transfusion in the wounded are injuries to the brain and central nervous system (in which little response is obtained), damage to the lung by blast, irritant gases or steam (which often causes pulmonary oedema), thoracic wounds where the circulation is mechanically impeded, and the onset of the fat embolism which may follow bone damage. In our peace-time patients, on the other hand, we have always to consider the state of the heart muscle, the lungs, the blood-vessels, and essential organs, and from these findings the nature of the transfusion fluid, the amount to be administered, and the rate at which to give it, have to be carefully decided. In war one takes many a chance one cannot afford in peace." 47 references.

J. C. M. C.

BLUM, LEON L.: *Transfusion of Blood and Blood Substitutes in the USSR.*

Am. Review of Soviet Med. 2: 273-279 (Feb.) 1945.

"Bogomolets is probably known to many Americans for his development of antireticular cytotoxic serum and its relation to the problem of longevity. His studies lead him to the concept of the so-called 'colloidoclasia' as being the basic phenomenon which explains the possible effects of blood transfusion. Briefly stated, colloidoclasia consists in the action of transfused blood upon unstable cytoplasmic protein molecules, leading to their flocculation and breakdown with the formation of

autocatalysts. These substances exert a stimulating effect on many functions of the body. According to Bogomolets, colloidoclasia and autocatalysts form the basis for the stimulating effect of blood transfusion. . . .

"The concept of colloidoclasia served to define the action of transfused blood as stimulating and desensitizing and as increasing the local and general reactivity of the body. This led to numerous Russian investigations dealing with the therapeutic effect of group incompatible blood. Repeated injections of very small doses (5-8 cc.), preferably at intervals of 3-4 days, produced a marked colloidoclastic post-transfusion reaction, not severe enough to threaten life but sufficiently pronounced to increase the functional activity of the reticulo-endothelial and other systems. The use of larger doses, such as 12-15 cc. is contraindicated because it induces severe hemolytic reactions. Symptoms following injections of small doses of incompatible blood rapidly disappear without any special treatment. At the present state of our knowledge the Central Institute for Blood Transfusions recommends the therapeutic use of incompatible blood in cases of chronic or recurrent ulcers of stomach and duodenum, subacute septic states, and a few other conditions."

A. W. F.

SPECK, GEORGE, AND SONN, EVE B. *An Intragroup Hemolytic Transfusion Reaction in an Rh-Positive Patient.* Am. J. Obst. & Gynec. 49: 273-275 (Feb.) 1945.

"It is now considered a fact that if a pregnant woman is Rh negative and if her fetus is Rh positive, the baby's blood may sensitize the mother and stimulate the production of Rh isoantibodies. At some subsequent time, if such a sensitized woman should be given a transfusion of Rh-positive