

Literature Briefs

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Literature Briefs were submitted by Drs. L. Bachman, C. M. Ballinger, N. Bergman, A. Boutros, W. Boyd, D. R. Buechel, H. Cascorbi, R. B. Clark, J. J. Downes, D. Duncalf, M. I. Gold, W. Mannheimer, F. C. McPartland, D. H. Morrow, R. C. Morton, E. S. Munson, H. Roc, L. J. Saidman, A. D. Sessler, and S. M. Shnider. Briefs appearing elsewhere in this issue are part of this column.

Circulation

BLOOD VOLUME EXPANDER Several preparations of a derivative of amylopectin (hydroxyethyl starch, or HES) were shown to be nonimmunogenic in rabbits, guinea pigs, and man. HES appears to merit further investigation as a possible blood volume expander provided it has no deleterious effects on plasma or cellular components of blood. (Maurer, P. H., and Berardinelli, B.: *Immunologic Studies with Hydroxyethyl Starch (HES), A Proposed Plasma Expander, Transfusion* 8: 265 (Sept.) 1968.)

CROSS-CIRCULATION IN BABOONS

Potential clinical and hematologic complications were studied in 18 baboons subjected to cross-circulation for five to 31 days. Cross-circulation was safe during the first four days. After that time, anaphylactoid reactions potentially fatal for one or both partners, thrombocytopenia, leukopenia, hemolytic anemia, and bone-marrow depression were seen. When cross-circulation was discontinued, eight of nine baboons showed prompt clinical and hematologic recovery without late sequelae.

(Storb, R., and others: *Clinical and Hematologic Effects of Cross Circulation in Baboons, Transfusion* 9: 23 (Jan.) 1969.) **ABSTRACTER'S COMMENT:** This well-documented article provides information and references on cross-circulation techniques which may prove useful in the management of patients with kidney, bone marrow, or liver failure.

DEXTRAN Cardiorespiratory effects of infusing 500 ml of dextran 40 into normal patients (controls) and patients in shock were studied. Following dextran, 19 of 26 shock patients and all controls had increases in cardiac index, CVP, and central blood volume, and decreases in total peripheral resistance and mean transit time. Seven of 26 shock patients failed to have hemodynamic improvement after dextran. Plasma volume increases paralleled the changes in cardiac index in both normal and shock patients but were greater and more prolonged in the shock group. The beneficial effect of dextran 40 in shock patients is due both to its effect on increasing plasma volume and to the improvement in small-vessel flow with redistribution of blood from the microcirculation into the central circulation. (Mohr, P. A., and others: *Sequential Cardio-respiratory Events during and after Dextran-40 Infusion in Normal and Shock Patients, Circulation* 39: 379 (March) 1969.)

SHOCK Hemorrhagic shock was induced in Wistar rats by rapid hemorrhage from the femoral artery; mean arterial pressure of 30 mm Hg was maintained for 240 minutes. The blood was then returned to the rats over a period of ten minutes. Animals thus treated, and another group given 0.9 per cent sodium chloride solution (1.8 ml/100 g body weight), had survival rates of 50 per cent. There was a significant increase in survival in five other groups of animals that were given hypertonic solutions (1200 mosmol/l) following the retransfusion. Since sodium chloride, mannitol, glucose and Sorbitol with Rheomacrodex produced very similar results, it was concluded that the effects of hypertonic solutions in shock depend only on the hypertonic character of the solutions and not on the presence of sodium ions. (Messmer, K.: *The Effect of Hypertonic Solutions in Irreversible Shock of Rats, Der Anaesthetist* 17: 295 (Sept.) 1968.)