

## Literature Briefs

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Literature Briefs were submitted by Drs. G. E. Battit, R. B. Clark, L. H. Cooperman, B. C. Dalton, A. Goldblatt, E. Lowenstein, L. C. Mark, H. Rackow, and S. M. Shnider. Briefs appearing elsewhere in this issue are part of this column.

### Circulation

#### AUTOLOGOUS BLOOD TRANSFUSION

178 patients each had as many as 4 units of whole blood drawn within ten days prior to operation, for reinfusion during elective major operations. Blood was stored at 4 C in ACD solution until administered. Iron dextran solution (Imferon), 250 mg, was administered iv after each unit of blood was withdrawn to furnish adequate iron for erythrocyte formation. All patients came to surgery with hemoglobin levels greater than 30 per cent of pre-blood-withdrawal values; none showed clinical evidence of blood volume depletion. Nine reactions to iron dextran were observed; one was serious and consisted of syncope and respiratory arrest. (Newman, M. M., Hamstra, R., and Block, M.: *Use of Banked Autologous Blood in Elective Surgery*, J.A.M.A. 218: 861-863, 1971.) ABSTRACTER'S COMMENT: Reinfusion of stored autologous blood may well be the safest form of blood transfusion. The maximum amount of blood that can be safely withdrawn, the need for and safety of administering iron dextran, and the optimum method for preservation of blood need further clarification.

#### MYOCARDIAL REVASCULARIZATION

Forty patients (31 male) with cardiac failure due to ischemic coronary heart disease underwent direct myocardial revascularization by aortocoronary bypass graft. In all cases the symptoms of congestive failure were the primary disabling feature, and drug therapy before operation had included cardiac glycosides and diuretics. Fourteen patients had not experienced angina, and five were without evidence of prior myocardial infarction; 32 pa-

tients (88 per cent) were in class III or IV according to the New York Heart Association classification. Preoperative cardiac catheterization and left ventriculography confirmed the presence of left ventricular failure in all patients; 23 had reduced contractility, and 11 each had an aneurysm of the left ventricle. Selective coronary angiography established that ten patients each had significant (greater than 75 per cent) involvement of three coronary arteries, and the remaining patients each had involvement of two vessels, the right and the left anterior descending coronary arteries. Utilizing the heart-lung machine with hypothermia, 30 double-vein and 10 single-vein grafts were inserted; included also were five aneurysmectomies and one mitral-valve replacement. There were six hospital deaths (two intraoperatively), all from ventricular failure, and three later deaths (two from myocardial infarction). Observation of the other patients for 3 months to 3 years revealed that all demonstrated improvement, particularly those with angina, ranging from excellent (15 patients) to good (ten patients) to fair (six patients). Postoperative angiography of five patients confirmed the clinical evaluation and revealed occlusion of one of a double graft in a patient who was rated as having had a fair result. (Mundth, E. D., and others: *Direct Coronary Arterial Revascularization*, Arch. Surg. 103: 529-534, 1971.) ABSTRACTER'S COMMENT: Evaluation of the eventual impact of reconstructive coronary artery surgery on the natural history of ischemic heart disease will require a wealth of follow-up information, such as this paper provides. In view of the rapidly growing enthusiasm for this type of operation, proper selection of patients and skilled intra- and postoperative management are necessary. These requirements are very demanding in terms of commitment of personnel and financial resources. Although the rationale is to reverse the course of ischemia and impaired cardiac function, the questions of success and ultimate outcome are still in the balance.