

cal and surgical practice. . . . Considerable financial saving has of course been possible, but the chief value of the bank has been the ready availability of blood when needed and the elimination of the usual confusion attending the selection of suitable donors for transfusions in emergency situations which frequently arise during the night or on week-ends, holidays, et cetera. . . .

"At the beginning we believed that the blood could be stored for at least three weeks. Now we believe that a maximum of a week is preferable. . . . Experience has proved that the use of universal donors is a safe practice. . . . Considering the fact that any bacteria present will be in small numbers and probably non-pathogenic, and the natural bactericidal properties of the recipient's blood, it would seem that the taking of blood cultures routinely from bank blood when it is used is both unnecessary and impractical. . . . The speed of giving the blood has also been studied and we have been forced to the conclusion that the optimum time for a transfusion, as far as reactions are concerned, is from sixty to ninety minutes. Several months ago we discontinued heating the blood before giving it and our figures would indicate that this change has reduced the percentage of reactions. The chief objections to heating appear to be frequent overheating and undesirable agitation while heating. Over 1,000 consecutive transfusions of cold blood have been given, frequently out of the refrigerator less than thirty minutes. The only untoward result of this practice that we have been able to see, has been a local cooling of the tissues in and around the antecubital fossa and this did not seem to annoy the patient. . . . To discuss the percentage of post-transfusion reactions is difficult because in no two series of cases are the same criteria used. Because such a discus-

sion has little comparative value it will be omitted here. The amazingly low percentage of reactions in some series would indicate that very liberal criteria are sometimes employed." 9 references.

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BRINES, O. A., AND MANNING, J. E.: *Development of the Plasma Bank*. J. Michigan M. Soc. 40: 204-207 (March) 1941.

"Blalock has stressed the use of plasma as the ideal treatment for shock from all causes and it has been known for years that plasma is a valuable therapeutic agent in cases of severe burns. It now seems apparent that plasma is preferable to whole blood in all emergencies where transfusions have been employed in the past except carbon monoxide poisoning, where normal red cells are badly needed. Severe hemorrhage is no exception to this statement because here it is shock and not anemia which endangers the patient's life and which must be combated promptly and forcefully. We are coming to realize that the chief indications for whole blood transfusion are to correct severe acute anemia from hemorrhage after the patient has been restored from shock and to correct severe chronic anemia where drug therapy is either inadequate or impractical, e.g., in preparation of an anemic patient for operation. Prior to the advent of the blood bank, plasma was not readily available but today it is a natural by-product of the former. . . .

"The method of preparing plasma in this hospital has been reduced to its simplest form. At the end of twenty-four hours the citrated blood has usually separated into two distinct layers with the supernatant plasma assuming a clear yellow color. At the end of three days maximum packing of the cells has occurred. Our method of removing the plasma has been to use

a regular blood-taking set and by substituting a capillary or opsonic pipette for the needle adapter the plasma can be aspirated into a regular transfusion flask, practically a closed system being maintained. Between 25 cc. and 50 cc. (about 1 cm.) of plasma will be lost because of cell contamination. If desirous of recovering this small amount, this thin layer of plasma could be transferred to one or two 50 cc. centrifuge tubes and the cells thrown down. We have felt that the loss of this small amount of plasma was negligible compared with the labor necessary to recover it, together with the possibility of bacterial contamination, and have adhered to careful aspiration to the point where cells begin to be removed. Each flask will contain about 450 cc. of plasma representing one liter of whole blood. . . . Plasma which is capable of agglutinating the recipient's cells *in vitro* does not do so when administered intravenously because its agglutinins are thereby so diluted that its agglutinin titer falls to an impotent level. . . .

"The use of plasma without regard for its blood group is based upon the same fundamental logic as the successful use of universal whole blood donors. The cells of group O blood contain no agglutinogens and plasma contains no blood cells. The two situations are identical from the standpoint of incompatibility, agglutination not being possible in either instance. Being able to disregard blood groups in giving either whole blood or plasma is a decided advantage considering the growing complexity of isohemagglutination and the recognition today of at least six types of blood. The successful use of plasma without regard for its blood group should eradicate all remaining opposition to the employment of universal whole blood donors. An additional advantage of plasma over whole blood is the speed with which it can be

given. We have no evidence that plasma can be given too rapidly." 8 references.

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DANIELS, W. B.; LEONARD, B. W., AND HOLTZMAN, SAUL: *Renal Insufficiency Following Transfusion: Report of Thirteen Cases*. J. A. M. A. 116: 1208-1215 (Mar. 22) 1941.

"During the past few years we have had the opportunity to observe 5 instances of renal failure after transfusion. Indeed, one of us in the course of his private practice within a few months was called to see 3 patients with this condition. In none of these cases had the attending physician thought of the transfusion as a causative factor in his patient's illness. It seems probable, therefore, that it occurs more commonly than is generally realized and that frequently the diagnosis is not made. Those patients who are treated with transfusions of blood are often suffering from some severe illness which in itself may cause renal failure, so the transfusion is too often not considered the cause of the difficulty. Since the methods of grouping, cross matching and transfusing blood have been perfected, transfusion has become so common that respect for its hazards has waned. There is no branch of medical practice in which it is now not a common mode of therapy. So we think it worth while again to call the attention of the profession to one of the serious reactions that may follow transfusion. . . . During the last few years we have seen 5 instances of renal failure following transfusion. Through the cooperation of our colleagues, we have collected other cases occurring in Washington hospitals. We are reporting 13 instances of this entity. . . .

"Among 13 patients with renal insufficiency following transfusion 6 recovered and 7 died. An immediate or delayed reaction occurred as a result of