

tered blood 56 days old without untoward results to their patient, and they claim that placental blood can be stored safely for eight to ten weeks, using a citrate saline anticoagulant with dextrose added. . . .

"The conclusion to be drawn from all this work on placental blood is to me a simple one, and for the purpose of clarity can be set down in tabular form: (1) The placenta as a source of blood for transfusions is a meagre one, each delivery providing an average yield of 75 c.cm. or less. . . . (2) No matter how careful the operator and how aseptic his technic of collection, the indisputable fact remains that the catchment area from which placental blood is obtained is a dirty and, at best, potentially infected one. If placental blood is to be used at all, every sample must be cultured. . . . (3) Placental blood has nothing of advantage to offer, and much of disadvantage, when compared with adult donor blood." 8 references.

J. C. M. C.

PHILIPPOX, P. L.: *Transfusion of Placental Blood*. Vestnik khir. 5: 522-526 (May) 1939.

The prospect of using placental blood for transfusions has been attracting much attention. After many experiments it was found that placental blood has hormone properties. Another author has written about 700 placental blood transfusions and subcutaneous injections. According to various authors the quantity of blood in a single placenta is from 60 to 130 cc. (The size of the placenta and development of the cord must be considered.) The blood drawn from the placenta was bacteriologically tested and found to be sterile. The blood must be kept in a cold storage place, but in this study it was not used later than fifteen days after collection.

At the beginning of the work with placental blood the author chose patients with some endocrine deficiency or those who needed blood transfusion as stimulation rather than substitutions. Placental blood was used subcutaneously in 41 instances as psychotherapeutic treatment in patients with schizophrenia. Later on the placental blood was used as regular donor's blood in patients with severe anemia.

A total of 202 transfusions to 147 patients is reported. Many patients received repeated transfusions of 50 to 400 cc. at a time. In general there was no reaction, or very mild (some elevation of temperature to 0.5 degrees) reaction observed, and only in two instances were there severe chills with temperature elevation to 2 degrees.

These reactions were:

(1) A female patient, 36 years of age, with pernicious anemia. One blood transfusion of 200 cc. was followed by a severe reaction and very slow increase of erythrocytes.

(2) A girl of 15 years of age with metrorrhagia juvenilis. A placental blood transfusion of 50 cc. was followed in two hours by a reaction lasting two days, with acute irritation of the kidneys without hemoglobinuria. Vaginal bleeding ceased two hours after transfusion. It was observed that the placental blood acted as a stimulant, the patient acquired a better appetite and there was an increase of leucocytes and hemoglobin. Elevation of blood pressure to 5-10 mm. of mercury began almost at the start of the transfusion.

In general it was found that the subsidings action of placental blood was much higher than regular donor's blood. For example:

(1) A patient of 23 years of age with acute cholecystitis and high temperature. After an unsuccessful attempt with the usual methods of treatment a transfusion of 100 cc. of placental blood was administered. On the third

day the temperature was normal and acute symptoms had subsided. After two more transfusions the patient was discharged as being improved.

(2) A boy of 11 years of age, admitted in shock with commotio cerebri, fracture of pelvis and separation of subcutaneous tissues of back. A transfusion of 200 cc. of placental blood quickly brought up the blood pressure; as a result, the patient recovered.

#### SUMMARY

(1) Morphological, biochemical and hormone properties of placental blood are much different from regular donor's blood.

(2) Placental blood can be used for transfusions and is very easily preserved if regular rules for conservation are observed.

(3) The therapeutic effect of placental blood promises a great future to this homo-hemotransfusion.

(4) The most effective results were obtained in patients with traumatic shock, hemorrhage and inflammatory lesions.

(5) There must be more research performed and better technic applied while withdrawing the blood to prevent contamination and waste of placental blood. At present there is a 17 per cent loss of blood because of imperfect technic.

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BARTON, F. E.: *A Simplified Citrate-dextrose Blood Preservative*. J. A. M. A. 116: 1196-1197 (Mar. 22) 1941.

"In the Oct. 14, 1939 issue of THE JOURNAL the Transfusion Service of the Massachusetts Memorial Hospitals, Boston, reported on 'The Use of Placental Blood for Transfusion.' This article emphasized among other things the advantage obtained by the addition of dextrose to the preservative. We reported that the addition of dex-

trose retarded hemolysis from fourteen and four-tenths days to twenty-two and three-tenths days. This same paper stated that we were confident a series of blood specimens then being studied would show an even more delayed hemolysis. It is on this series of 250 blood specimens that we are now reporting. . . . A technic of preserving blood by the use of a simplified citrate-dextrose solution was adopted. Fifty flasks preserved with sodium citrate 2.5 per cent and dextrose 0.5 per cent failed to show hemolysis for twenty-one days. Ninety-two flasks preserved with sodium citrate and dextrose 2.5 per cent failed to show hemolysis for forty-six days. Eighty-four flasks with sodium citrate 2.5 per cent used as a control showed hemolysis in fifteen days. Blood preserved with the citrate-dextrose solution has been used clinically with good results." 4 references.

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BRINES, O. A., AND MANNING, J. E.: *Experience with the Blood Bank*. J. Michigan M. Soc. 40: 201-204 (March) 1941.

"Generally speaking a blood transfusion is a hospital procedure and the comparative simplicity of the indirect transfusion has led to its widespread adoption in institutional practice. . . . The blood bank at Detroit Receiving Hospital had its beginning in a small way during the summer of 1937 when an occasional bottle of citrated blood would be placed in the ice box of the main laboratory for several days until the patient for whom it had been taken was in need of a transfusion. . . . The value of having blood always available became more and more appreciated, and at the beginning of the second year the attitude toward the bank changed abruptly and for the past two years the bank has been accepted as an indispensable adjunct to institutional medi-