INTRAUTERINE TRANSFUSION

(A Case Report)

by

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Pregnancy complicated by Rhesus immunization has been an age old problem.

Animal experiments in early part of the Nineteenth Century had proved that blood introduced into the peritoneal cavity was absorbed. In 1923 Siperstein described effective intraperitoneal transfusion in infants and further studies showed that within four to six hours of transfusion two thirds of the blood in the peritoneal cavity was absorbed via the lymphatics.

Liley in 1963 reported the first successful intrauterine transfusion. We are reporting a case of successful intrauterine transfusion.

CASE REPORT

Mrs. S. G. aged 24 was referred to us on 23rd June 1979 as a case of Bad Obstetric History. She had 4 full term deliveries. The first baby born in 1972 died half an hour after birth. The second was a full term still-birth in 1974 The third full term delivery in 1976 died one and half hour after birth, the fourth full term delivery in 1977 died half an hour after birth. All the neonates died of severe jaundice.

Menstrual History: She had regular menstrual cycles. Her last menstrual period was on 20th November, 1978 and hence the calculated expected due date was 27th August, 1979.

General Examination: Revealed her pulse 88/min. regular. Her blood pressure was 120/70 mm.Hg. There was no oedema of feet. Respiratory and cardiovascular systems showed no abnormality.

On abdominal examination the fundal height was twenty eight weeks. There was breech presentation and fetal heart sounds were normal.

Her investigations revealed —

Haemoglobin : 10 gm.%, V.D.R.L.—Negative
Blood Group : O Rh negative—Husband B Rh Positive (Homozygous)

Her reports of antibody titre done on two occasions prior to admission at the 3rd and 5th month of gestation showed that the albumin antibodies were 1 : 128 and 1 : 256 respectively and repeat examination on 9-7-1979 (seventh month) was positive for 1 : 512 dilution. Enzyme method for antibody estimation showed titres of 1 : 16, 1 : 128 and 1 : 256 at the third, fifth and seventh month respectively.

Ultrasonogram for the measurement of the biparietal diameter and placental localization was done on the day of admission. The placenta was localized in the anterior and fundal portion of the uterus. The biparietal diameter was 6.5 centimeters on admission. A repeat bipa-

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rietal diameter measurement two and three weeks after admission showed that it was 7 and 7½ centimeters respectively.

Amniocentesis done on the third and twelveth July revealed the following:

Bilirubin : 0.8 mgms. and 0.8 mgms. respec-

Creatinine : 0.6 mgms. and 0.8 mgms. respectively.

Optical density : 0.49 nanometer (Freda + 3 abnormality) and 0.34 nanometer (Freda + 2 abnormality).

MANAGEMENT

During her stay a daily monitor of patient's weight and fundal height was measured. She was administered tablet phenergan 25 mg. one tablet thrice daily and tablet phenobarbitone 30 mgm. thrice daily. 2

Twenty days after her admission (13-7-1978) an intrauterine transfusion was performed. The patient was sedated with 75 mgm. pethidine and 25 mgm. phenergan. A Verres needle was used for the procedure. Under an image intensifier 2 cc. of Conray 420 was injected to confirm that the needle was first in the amniotic cavity (Fig. 1). The needle was slowly negotiated into the fetal peritoneal cavity and another 5 cc. of the dye was injected for confirmation. Eighty ccs. of O Rh negative packed cell was injected slowly. After the procedure the pulse and blood pressure were within normal limits. The uterus was well relaxed and the fetal heart sounds initially raised to 160 per minute settled to 140 per minute one hour after the procedure. There was no vaginal bleeding. The patient was given ampicillin 500 mgm. I.Q.D.S. Thirteen days after the procedure the patient went into spontaneous labour. A lower segment caesarean section was done in view of her bad obstetric history and breech presentation.

A premature fetus was delivered. Neonatal weight was 1.6 kgs. All signs of hydrops fetails were present. A distinct puncture mark one centimeter from the umbilicus indicated the site of puncture of intrauterine transfusion (Fig. 2).

Histopathology report of the placenta showed all signs of hydropic degeneration. Cord Blood : Blood group : B Rh positive serum Bilirubin : 3.6 mgm.% total, 1.2 mgm.% indirect. Direct coombs test : 4 positive.

The baby expired one hour after delivery inspite of all attempts to revive it.

Discussion

Though intrauterine transfusiòn has been advocated widely in a Rhesus immunized mother the perinatal mortality rate is extremely high. Queenan (1969) in a co-operative study showed that the perinatal mortality was 91 per cent in cases where an intrauterine transfusion was done prior to the twenty fifth week of gestation. It was 76 per cent and 44 per cent when the intrauterine transfusion was done at the twenty sixth and twenty eighth weeks respectively. In general, the optimal time for an I.U.T. is at about 32 weeks of gestation. The role of Phenobarbitone and Phenergan as advocated by Trolle (1968) and Grisdon (1973) respectively, during pregnancy is still in the experimental stage to warrant a unanimous approval.

Conclusion

Case report on intrauterine transfusion has been presented.

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See Figs. on Art Paper IV