A rare case of fetal blood transfusion for anemia caused by a giant placental chorioangioma

Shira Raviv[1]; Alon Shrim[1]; Julia Eidel[1]; Yoav Yinon[2]; Boaz Weiz[2]; Shlomo Lipitz[2]; Motty Hallak[1]; Rinat Gabbay-Benziv[1]

[1]Obsterics and Gynecology Department, Hillel Yaffe Medical Center, Hadera; The Rappaport faculty of Medicine, Technion, Haifa, Israel. [2]Tel Hashomer Medical Center, Ramat-Gan; Sackler Faculty of Medicine, Tel-Aviv, Israel.

Background:

Chorioangiomas (CAs) are the most frequent tumor-like-lesions of the placenta. Giant CAs (> than 4-5 cm in diameter) are rare and may result in severe maternal fetal complications.

Case presentation:

A 38-year-old multigravida presented at 31 weeks' gestation with contractions. Upon evaluation, contractions were spontaneously ceased, and the cervix was closed. Ultrasound examination revealed a single viable fetus, polyhydramnios and a 75x48x82 mm vascular lesion located on the placental surface near the cord insertion (Figure 1,2). Doppler assessment was suggestive of fetal anemia with MCA-PSV 1.8 MoM's. Fetal heart rate monitoring and biophysical scores were reassuring. Following betamethasone, fetal cord sampling revealed fetal hemoglobin level of 8.8 gr/dl and 57 cc of blood was transfused resulting in final hemoglobin of 14.3 gr/dl. MCA-PSV normalized immediately after the procedure, however aggravated at the following day with MCA-PSV 65 cm/sec (1.46 MoM's). No other intervention was taken and MCA-PSV continued to fluctuate from slight to severe anemia spontaneously over a period of two weeks. At 34 gestational weeks, the women delivered a healthy baby. Fetal Hemoglobin level at delivery was 21 gr/dl.

Conclusion:

Fetal blood transfusion is a reasonable treatment for fetal anemia in cases of giant CA's. Following transfusion, MCA-PSV may act unexpectedly reflecting various mechanisms affecting the flow.

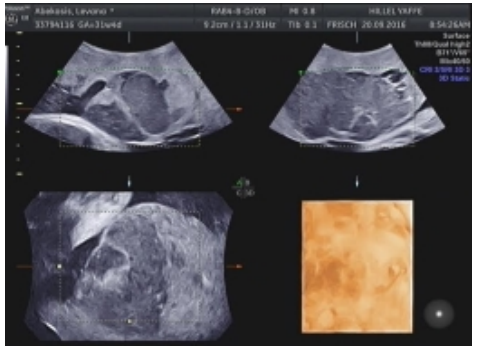

Figure 1: sonogram obtained at 31+4/7 weeks shows a well defined non-homogeneous, placental mass

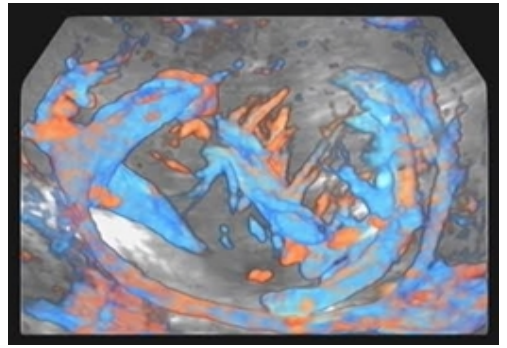

Figure 2: Three-dimensional ultrasound image of placental chorioangioma

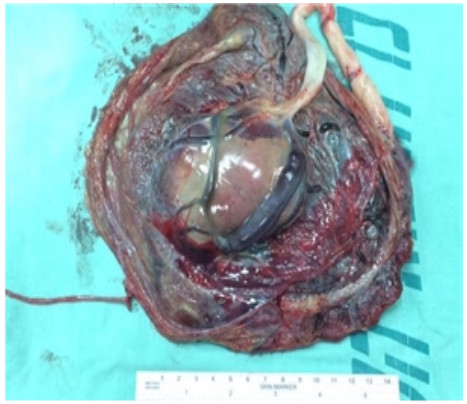

Figure 3: Macroscopic view of the placenta, chorioangioma

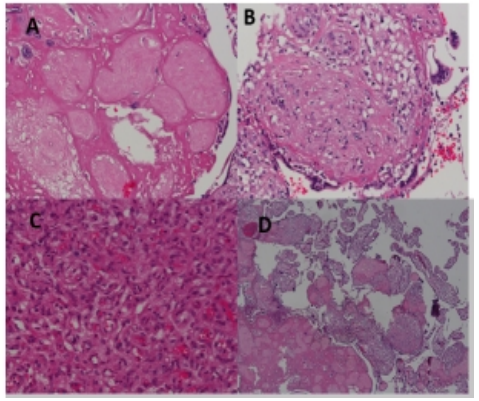

Figure 4: Pathology images: A- Infarct of the placenta, B- chronic villitis, C- chorioangioma tissue, D- placental tissue.