P17.07- Chorioangiomas with signs of fetal compromise on ultrasound evaluation: a case series.


INTRODUCTION
Chorioangiomas (ChAs) are benign placental tumors that occur in around 0.6% of pregnancies (1). Giant ChAs, which are greater than 4cm in diameter, can disrupt fetal circulation and pregnancies with this condition are more likely to present growth restriction, fetal heart failure, polyhydramnios, feto-maternal transfusions, and maternal uteroplacental dysfunction (IUD) (2). When ChAs are diagnosed antenatally, close ultrasound examination is recommended, but the optimal ultrasound management is unknown (3). We report our experience in the management of four cases of ChAs diagnosed at our center between 2016 and 2019. All cases were diagnosed at the routine second trimester scan and followed thereafter with serial ultrasounds performed at least every two weeks to evaluate fetal growth, wellbeing, and systematic Doppler evaluation of the middle cerebral artery peak systemic velocity (MCA PSV), ductus venosus (DV), and umbilical artery (UA). The diagnoses of CHA were confirmed by placental pathologic examination.

CASE 1
• 21+3 weeks: Diagnosis of 6.4x 5.3 cm CHA with polyhydramnios.
• 28+6: Corticosteroids administered due increasing polyhydramnios.
• 28+6: CHA increased up to 10.4x 8.0x 5.9 cm and amniotic fluid index (AFI) to 38.7 cm with short cervical length of 13 mm. Normal Doppler of MCA PSV, UA, and DV.
• 29+0: Aminolevulic acid performed for maternal discomfort.
• 29+1: The patient entered preterm labor overnight and cesarean was performed for fetal presentation.
• Birth of a 1450g female, Appar 5-7-8. Cord hemoglobin (Hgb) 99g/L.
• The neonate was anemic but no transfusion was required.
• Diagnosed with grade 2 intraventricular hemorrhage, severe bronchopulmonary dysplasia, and stage 1 retinopathy. Discharged from the NICU without oxygen at day 54 of life.

CASE 2
• 22+2 weeks: 4.7x 1.9 cm CHA with normal AFI.
• 28+2: CHA had grown to 8x 3.5cm with normal AFI and Doppler.
• 32+4: Increase of the MCA PSV to 1.5 MoM with normal cardiac function.
• 35+2: Evaluation for cordocentesis: decision not to perform because it of the advanced gestational age with stable MCA PSV at 1.6 MoM.
• 32+6: Corticosteroid administered. MCA PSV remained stable.
• Given the risk of fetal anemia delivery was scheduled at 34 weeks.
• 34+2: Early cesarean section.
• Birth of a 2539g male, Appar 3-5-7. Cord Hgb 98g/L.
• No transfusion was required. Discharged home after 4 days.

CASE 3
• 21+6 weeks: 42.6 mm CHA with high vascularization, normal AFI.
• 31+0: CHA had grown to 8.7 cm with polyhydramnios up to 25.2 cm AFI. Normal ACM PSV, DV, UA. Cardiac hypervascularisation noted without cardiac failure.
• 32+0: Increase of MCA PSV to 1.53 MoM: admission and administration of corticosteroids.
• 32+1: De novo reversed cerebroplacental ratio and umbilical vein (UV) pulsatility.
• 32+1: Emergency cesarean for abnormal fetal wellbeing.
• Birth of a 1785g male, Appar 4-6-9. Cord Hbg 134 g/L.
• No transfusion was required. Discharged home after 36 days without respiratory or neurological sequelae.

CASE 4
• 20+6 weeks: 3.7x 2.7x 3.85 CHA near cord insertion with large nourishing vessel, normal AFI.
• MCA PSV remained normal throughout pregnancy.
• 34+1: Maximum growth of the CHA at 8.3 cm, normal AFI.
• 34+0 - 34+6: Deepen DV A wave and on and off pulsatility of the UV.
• 36, 33+6, and 35+4: Normal fetal cardiac ultrasound.
• The couple was counseled on the pros and cons of expectant management and preferred to deliver at late as possible.
• 33+4: Delivered by elective cesarean section.
• Birth of a 2600g female, Appar 8-8. Cord Hbg 114 g/L.
• No transfusion was required. Discharged home after 2 days.

DISCUSSION
In this case series, serial ultrasounds allowed us to tailor the management of four pregnancies with giant ChAs. The gestational age at delivery of our cases is comparable to previous literature, and neonatal outcomes are very favorable with no cases of IUD and no prenatals or postnatal transfusions (2). Doppler evaluation in particular allowed us to closely monitor fetal hemodynamics in order to appropriately time delivery and the administration of corticosteroids. Although preterm labor may have been related to the amnioreduction in Case 1, serial ultrasounds allowed careful expectant management in the other cases and did not increase prematal interventions.

CONCLUSION
In pregnancies with giant ChA, the systematic serial evaluation of fetal growth and wellbeing, amniotic fluid, MCA PSV, DV, and UA Doppler can help determine the tipping point between the risks of fetal distress in utero and the risks of iatrogenic prematurity in order to optimize neonatal outcomes.

REFERENCES