A rare case of fetal liver tumor diagnosed prenatally

Background
Liver tumors seldom occur in the perinatal period. Hepatic hemangiomas are the most common tumors of the liver diagnosed during fetal and neonatal life. The diagnosis can be suspected antenatally by ultrasound and MRI. The differential diagnosis is often challenging. While small hepatic hemangiomas are usually asymptomatic, large tumors can lead to complications such as high-output congestive heart failure, consumptive thrombocytopenic coagulopathy and hemorrhage after tumor rupture. We describe a case of hepatic tumor presenting as a highly vascular abdominal mass and confirmed by MRI.

Case
A 23-year-old woman, healthy, gravida 1 para 1, was referred to the fetal medicine unit, Al Kasr Teaching Hospital, Cairo University for a routine anomaly scan. She came to us at 31 weeks and 3 days. The detailed scan of the fetus was done and revealed a fetal abdominal mass. measures 61 mm x 31 mm x 56 mm diameter solid mass with several cystic areas highly vascular in the left upper abdomen, below the left copula of the diaphragm and anterior to left kidney. The ultrasound couldn’t be clearly identifying the origin of the mass either from the lower surface of the left copula or from the fetal liver. Figure (1) illustrate the gray scale image and Figures (2) illustrate HP Doppler blood flow image.

There was also a fetal cardiomegaly with a mitral and tricuspid regurge mostly due to the volume overload. Figure (3) illustrate cardiomegaly. Figure (4,5) illustrate mitral and tricuspid regurge.

Fetal MRI was subsequently performed for further characterization of this lesion and revealed a left upper quadrant cystic mass below the diaphragm anterior and separate from the left kidney, measuring 65 cm x 33 cm x 60 cm. Fetal MRI confirmed that it is originating from the fetal liver. On MRI, the proffered differential diagnosis included a Liver hemangioma vs hamartoma.Figure (6,7) illustrate liver mass by MRI.

Conclusion
Hepatic hemangiomas occurring during the antenatal period is difficult to diagnose And may cause severe perinatal complications and even result in fetal death. Proper fetal ultrasound scan during antenatal care can help us for early detection. Fetal MRI is being increasingly used as an additional technique for the accurate diagnosis of abdominal diseases.