Primary neuroendocrine tumor of the liver: A diagnostic dilemma in the management of liver mass in pregnancy

ABSTRACT

Neuroendocrine tumor (NET) commonly occurs in the gastrointestinal tract, however primary NET of the liver is rare, especially during pregnancy. We present a 34-year-old pregnant woman gravida 3 para 2 at 16 weeks period of gestation with primary liver NET discovered incidentally during the antenatal check-up. She has no risk factors for hepatocellular carcinoma. Her serum alpha-fetoprotein was elevated. A plain magnetic resonance imaging (MRI) of the liver delineating a large well-defined exophytic liver mass at segment V/VI measuring 7.1 × 7.4 × 7.8 cm. Given inconclusive MRI findings coupled with low-risk factors of HCC, we had decided to follow up her liver mass with imaging 6 weekly. She then underwent a right hepatectomy with a caesarean delivery at 32 weeks of gestation in the same setting. The histopathological formal report revealed a neuroendocrine tumor, grade 2 with a Ki-67 index of 3% with negative lymphovascular and perineural invasion, but positive for porta hepatis lymph nodes metastasis. A follow up after 1 year shows both patient and her infant are healthy. Antenatal discovery of liver masses poses a diagnostic and management dilemma to clinicians. A multidisciplinary approach and collective decision making are crucial to determine the best approach tailored to the maternal and fetal benefit. In cases of inconclusive non-contrast MRI in pregnancy with low-risk factors and lack of clinical evidence of HCC, follow-up with imaging modalities aiming to intervene at the third trimester can offer safer, and promising outcomes.