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Placental mesenchymal dysplasia and hepatic cyst

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ABSTRACT

Placental mesenchymal dysplasia (PMD) is a rare benign vascular anomaly of the placenta. It can be misdiagnosed as a molar pregnancy resulting in unnecessary termination of pregnancy.

A 30-year-old woman was referred to our hospital at 18 gestational weeks due to suspicion of molar pregnancy. The ultrasound showed a bulky placenta with multiple cysts. Oligohydramnion and fetal hypoechogenic cystic area without doppler flow were diagnosed at 23 weeks. The baby was operated on after delivery, and an 80 mm multifocal cyst originating from the right lobe of the liver was removed. The placenta demonstrated swelling stem villi with enlarged vessels and increased interstitial cells without trophoblast proliferation. PMD and fetal hepatic cyst can coexist; however, the relationship between those conditions remains to be elucidated. PMD is associated with adverse pregnancy outcomes but also with a good prognosis.

Key words: placental mesenchymal dysplasia; hepatic cyst

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INTRODUCTION

Placental mesenchymal dysplasia (PMD) is a benign placental, vascular anomaly characterized on ultrasonography by placentomegaly and grape-like vesicles. The incidence of PMD reaches 0.02% [1].

CASE REPORT

A 30-year old primipara was referred to hospital at 18 weeks of gestation due to suspicion of molar pregnancy. We diagnosed complete placenta praevia with excessive vascular flow behind the placental bed. The placenta was enlarged, changed by the areas of multiple cystic echoes without vascular flow (Fig. 1 and 2). The ultrasound revealed a normal fetus. The amniotic fluid was diminished. Imaging features raised the possibility of triploidy and partial molar pregnancy. Amniocentesis revealed normal fetal karyotype (46 XX). Polymerase chain reaction analysis of the amniotic fluid for TORCH microorganisms was negative. The patient's blood test revealed an elevated level of AFP. The HCG concentration was normal. The next follow-up at 23 weeks revealed an enlarged placental width with multiple cystic areas and highly vascular retroplacental surface, suggestive of accreta. Additionally, hypoechogenic cystic area of 33 × 21 mm without any doppler flow was diagnosed in the fetal abdominal cavity. The amount of amniotic fluid was still diminished. At 28 weeks of gestation, the placenta continued to be large and hydropic in ultrasound scanning. The fetal growth curves were normal but the hypoechogenic cyst enlarged to 73 × 40 mm, changed into multilocules still without any doppler flow. It was located mostly on the right side next to the liver and right kidney (Fig. 3). At 29 weeks 1-day of gestation, the mother presented with pre-term premature rupture of membranes (PROM). Due to pathological CTG, an emergency caesarean delivery was performed. The infant weighed 1320 g (74 percentile) with Apgar scores of 5 and 6 at 1 and 5 min, respectively. The gasometry from the umbilical artery excluded fetal acidosis. Intraoperatively, the placenta was normally adherent to the uterus. Gross examination of the placenta showed enlarged stem

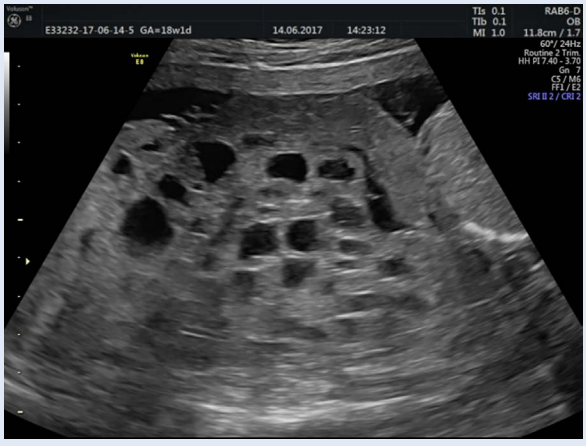

Figure 1. Enlarged placenta with the areas of multiple cystic echoes

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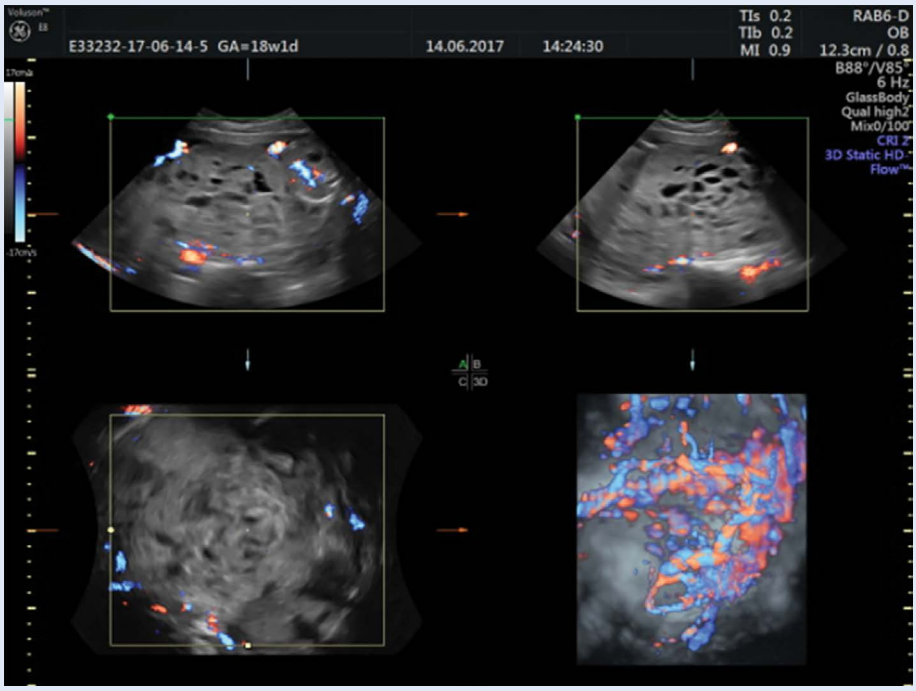

Figure 2. Enlarged placenta with the areas of multiple cystic echoes and excessive vascular flow behind the placental bed

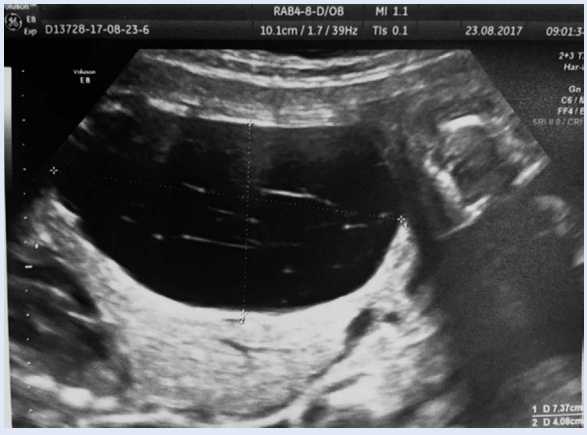

Figure 3. Hypoechogenic cyst in fetal abdominal cavity

villi. The placenta weighed 500 g what was around 90th percentile for that age of pregnancy [2]. Microscopic sections showed villi with thick dysplastic vessels surrounded by a myxoid edematous stroma with cistern formation. The findings were consistent with PMD. The neonate did not present with any macroscopic abnormalities at the time of delivery except enlarged abdomen circumference. In postpartum abdominal ultrasound, an 80 mm multifocal cyst was confirmed. The neonate was operated on day 4 post-delivery. The cyst appeared to have the origin in the right lobe of the liver. The outcome of the histopathological examination was the simple cyst of the liver. The baby was discharged at seven weeks after caesarean section in a good condition. The mother recovered normally and was discharged home on day 4 of postpartum.

DISCUSSION

In literature cases with PMD revealed cystic placentas in 80%, enlarged in 50% and dilated chorionic vessels in 16% [3]. Increased hCG level was found in 38% and AFP in 70% of cases [3]. The most common complication was preterm delivery (52%), PROM reached 17%. Intrauterine growth restriction (IUGR) occurred in 33%. Genetic abnormalities were found in 28%, Beckwith-Wiedemann syndrome was the most common, reaching 23% [4]. Neonatal hepatic tumors were diagnosed in 17% of PMD, mostly hepatic mesenchymal tumors [3]. Intrauterine fetal death was reported in 13% of cases, but 9% of patients had normal pregnancy outcomes [3]. It is important to distinguish PMD from a partial mole because incorrect diagnosis may result in pregnancy termination. PMD is associated with adverse pregnancy outcomes but also with a good prognosis.

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