Ultrasound Diagnosis of a Subcutaneous Cystic Formation in the Fetal Thorax

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Section 1 – Quiz

Case Description

A 39-year-old pregnant woman, primigravida, was referred to our obstetric department in the first trimester of pregnancy for pregnancy surveillance due to her age.

First-trimester combined screening reported a low risk for trisomies 13 and 18 and an intermediate risk for trisomy 21 of 1 in 398. After prenatal counseling, the parents refused amniocentesis and opted for cell-free fetal DNA testing, which showed a low risk for fetal 13, 18, and 21 aneuploidies.

The 21-week scan showed a live female fetus showing a subcutaneous left thorax edema up to the abdominal region measuring 60 mm × 20 mm × 15 mm without blood flow on color Doppler [Figures 1 and 2]. No other fetal anatomical abnormalities were seen during the scan. The placenta was located on the posterior wall of the uterus, and the amniotic fluid was normal.

Due to the finding prenatal counseling was provided, and amniocentesis was performed at 22 weeks. QF-PCR, array-CGH, and TORCH group testing were ordered, and a fetal echocardiogram was also performed.

A complementary magnetic resonance study was requested at 29 weeks of gestation that showed a cystic formation in the left thorax wall, multiseptate, with no blood flow on color Doppler, measuring 58 mm × 46 mm × 20 mm, without mass effect on the underlying structures [Figure 3].

The 34-week scan showed normal fetal growth and amniotic fluid volume and the cystic mass with 60 mm × 50 mm × 30 mm without apparent muscular or bone invasion [Figure 4].

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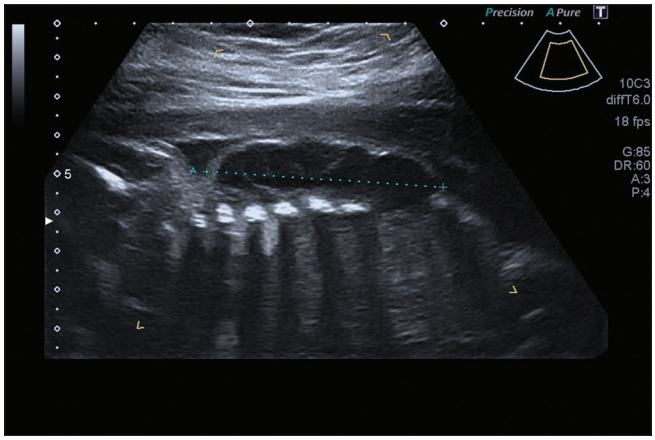

Figure 1: Twenty-one-week ultrasound: Sagittal plane of fetal thorax showing a multilocular tumefaction

Following prenatal counseling, a cesarean delivery was determined as the mode of delivery.

The pregnant woman underwent urgent cesarean delivery at 36 weeks and 4 days after preterm premature rupture of membranes, and a 2765 g female infant was delivered with an APGAR score of 9/10/10 [Figure 5]. The patient's postoperative course was uncomplicated, and both were discharged on day 3 after delivery. What is the diagnosis?

Ethics statement

This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and its amendments. The authors certify that they have obtained all

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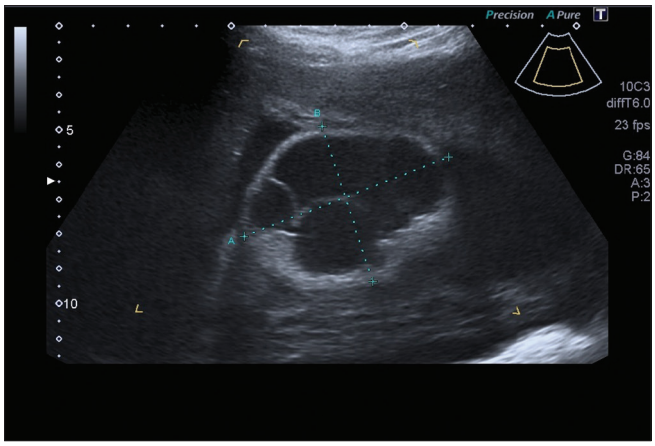

Figure 2: Twenty-one-week ultrasound: Transverse plane of fetal thorax showing a multilocular tumefaction

Figure 4: Thirty-four-week ultrasound: Sagittal plane of the fetal thorax tumefaction in the third trimester

appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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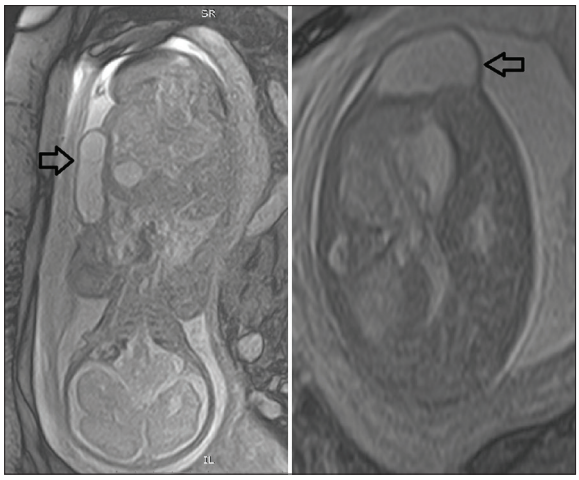

Figure 3: Magnetic resonance imaging at 29 weeks: Coronal and transverse planes of the fetus. The tumefaction is indicated by the arrow

Figure 5: Newborn with a left thoracic wall tumefaction indicated by the arrow

Conflicts of interest

There are no conflicts of interest.