Band neutrophil sign: corroborative case of a new pathognomonic finding

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DESCRIPTION

A 34-year-old G2P1, with no relevant medical history, had an increased risk of trisomy 21 on first trimester combined screening. Ultrasound at 12 weeks' gestation showed a normal nuchal translucency, present nasal bone and increased ductus venosus pulsatility index. Furthermore, no obvious stomach image was visualised, and a large cystic image was detected occupying most of the fetal abdomen and pelvis, resembling the C-shape loop described as the 'band neutrophil sign' by Ivanitskaya *et al*,¹ as shown in the presented figure 1. Chorionic villus sampling was performed at 14 weeks, and genetic results came out positive for trisomy 21. The patient decided to undergo a termination of pregnancy. Autopsy revealed distended stomach, incomplete intestinal rotation and combined duodenal and oesophageal atresia.

Figure 1 First trimester ultrasound—large cystic image occupying most of the fetal abdomen and pelvis, resembling the C-shape loop described as the 'band neutrophil sign'.

Learning points

- ▶ 'Band neutrophil sign' is a new pathognomonic sign of combined duodenal and oesophageal atresia, regardless of the presence of tracheoesophageal fistula.
- ▶ 'Band neutrophil sign' is described as a cystic symmetrical C-shaped loop occupying a central position in the fetal abdomen close to the anterior abdominal wall.

These findings come to corroborate the study of Ivanitskaya *et al*¹ when describing this first trimester ultrasound new marker for combined duodenal and oesophageal atresia, named 'band neutrophil sign'. This is a first trimester specific marker, characterised by a symmetrical C-shaped loop occupying most of the fetal abdomen in a central position and close to the anterior abdominal wall. Our case contributes to enhance the importance and relevance of this pathognomonic sign for the diagnosis of combined duodenal and oesophageal atresia, regardless of the presence of tracheoesophageal fistula.

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- 1 Ivanitskaya O, Odegova N, Shchapov N, *et al*. Band neutrophil sign: a strong first-trimester ultrasound marker of combined duodenal and esophageal atresia. *Prenat Diagn* 2020. doi:10.1002/pd.5848. [Epub ahead of print: 17 Oct 2020].

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