

•EP05.109 The Application Value of Ultrasound Combined with Genetics in Fetal Upper Gastrointestinal Obstruction

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Objectives: To evaluate the value of prenatal ultrasound and chromosomal microarray analysis (CMA) in the clinical prenatal diagnosis of fetal upper gastrointestinal obstruction.

Methods: We selected pregnant women who underwent CMA at our hospital between January 2022 and December 2025 due to prenatal ultrasound findings suggesting fetal upper gastrointestinal obstruction. We systematically analyzed the prenatal ultrasound characteristics, CMA results, and perinatal outcomes of these fetuses.

Results A total of 32 cases were included in the study. Based on the presence of other structural anomalies, they were divided into a group with isolated obstruction (22 cases, 68.8%) and a group with additional structural anomalies (10 cases, 31.2%). Ultrasound classification results included duodenal obstruction (“double bubble sign”) in 23 cases (71.9%) and esophageal atresia in 9 cases. The detection rate of chromosomal abnormalities was significantly higher in the group with associated anomalies (5/10, 50.0%) than in the isolated obstruction group (2/22, 9.1%), with a statistically significant difference ($P < 0.05$). The perinatal termination rate was 28.1% (9/32; 2 cases in the isolated obstruction group and 7 cases in the group with associated anomalies).

Conclusion:

Fetal upper gastrointestinal obstruction exhibits characteristic features on prenatal ultrasound and the risk of chromosomal abnormalities is significantly elevated when associated with other structural anomalies.

Image A: A double-bubble sign is visible on ultrasound;
Image B: A duodenal septum was observed intraoperatively.

