

Prenatal diagnosis of dextrocardia with situs solitus and normal cardiac anatomy with VUS

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Introduction

Dextrocardia is a rare congenital condition where the heart and apex are positioned on the thorax's right side. Frequently, it presents with cardiac anomalies. We present the second case of a prenatal diagnosis of dextrocardia with normal cardiac anatomy and situs solitus, and normal position of abdominal visceral organs. This is also the first case with genetic panel evaluation and a variant of uncertain significance.

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Case Report

A 33-year-old G2P1001 presented for a routine fetal anatomy ultrasound that detected the fetal heart and apex on the right side of the chest at 21 weeks. The stomach, liver, and IVC were in an orthotopic position. (Fig. A, B) The remainder of the fetal anatomy was unremarkable. Fetal ECHO confirmed dextrocardia and showed that, except for mild tricuspid valve regurgitation and cardiac malposition, the cardiac anatomy was unremarkable. The patient opted for genetic testing of cord blood at delivery and declined genetic amniocentesis. Fetal MRI at 30w5d confirmed the diagnosis of dextrocardia with situs solitus (Fig. C). At 38w2d, she presented in labor and delivered vaginally a 2970gm baby girl with APGAR 8 and 9 at 1min and 5mins. The newborn's course was unremarkable. Cord blood testing was negative for genes associated with heterotaxy and Primary Ciliary Dyskinesia, but showed heterozygosity for a VUS in the TTC12. At 2 months old, the baby is meeting all developmental milestones.

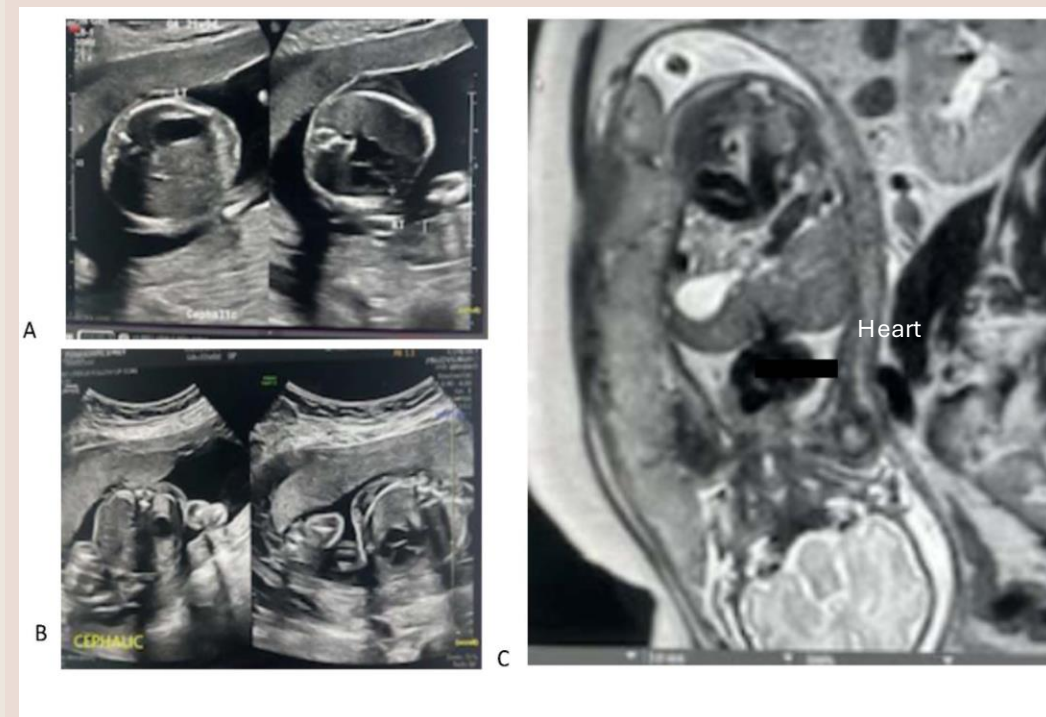


Fig. A+B indicating Dextrocardia and situs solitus at 21 wks and Fig C Fetal MRI at 30w5d

Conclusion

Prenatal diagnosis of isolated dextrocardia with normal cardiac anatomy is exceptionally challenging and rare. The VUS detected in this case may have genetic significance in cardiac and/or heterotaxic anomalies.