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Redundant Foramen Ovale Flap Presenting With Fetal Arrhythmia: A Case Report

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Introduction

Redundant foramen ovale flap (RFOF) is generally considered a benign anatomical variant. However, excessive mobility of the flap may predispose to atrial irritability and clinically significant fetal arrhythmias. We present a case of RFOF diagnosed following the detection of fetal arrhythmia.

Case Presentation

- 28-year-old G3P2 referred at 32+3 weeks because of fetal bradycardia.
- Ultrasound demonstrated:
 - Polyhydramnios
 - Large-for-gestational-age fetus
 - 2:1 atrioventricular block
 - Redundant foramen ovale flap extending to the left ventricular wall (opening 8.3 mm)
 - Premature atrial contractions
- During follow-up, supraventricular tachycardia developed (maximum heart rate 270 bpm).
- Maternal treatment with digoxin was initiated; sotalol was added because of persistent tachycardia.
- Sinus rhythm was restored, and sotalol was discontinued.
- Delivery by cesarean section at 37+4 weeks because of fetal distress.
- Male infant, 3045 g, Apgar scores 8 and 10.
- NICU admission for 3 days.
- Postnatal echocardiography demonstrated a 3-mm interatrial communication and PDA.
- Propranolol therapy was initiated.

Conclusion

- ❖ Although usually regarded as a benign anatomical variant, RFOF may serve as a substrate for both bradyarrhythmia and supraventricular tachycardia. Early recognition, close fetal echocardiographic surveillance, and individualized antiarrhythmic therapy can result in favorable prenatal and neonatal outcomes.
- ❖ Digoxin remains the first-line therapy, while sotalol or flecainide may be considered in refractory cases.

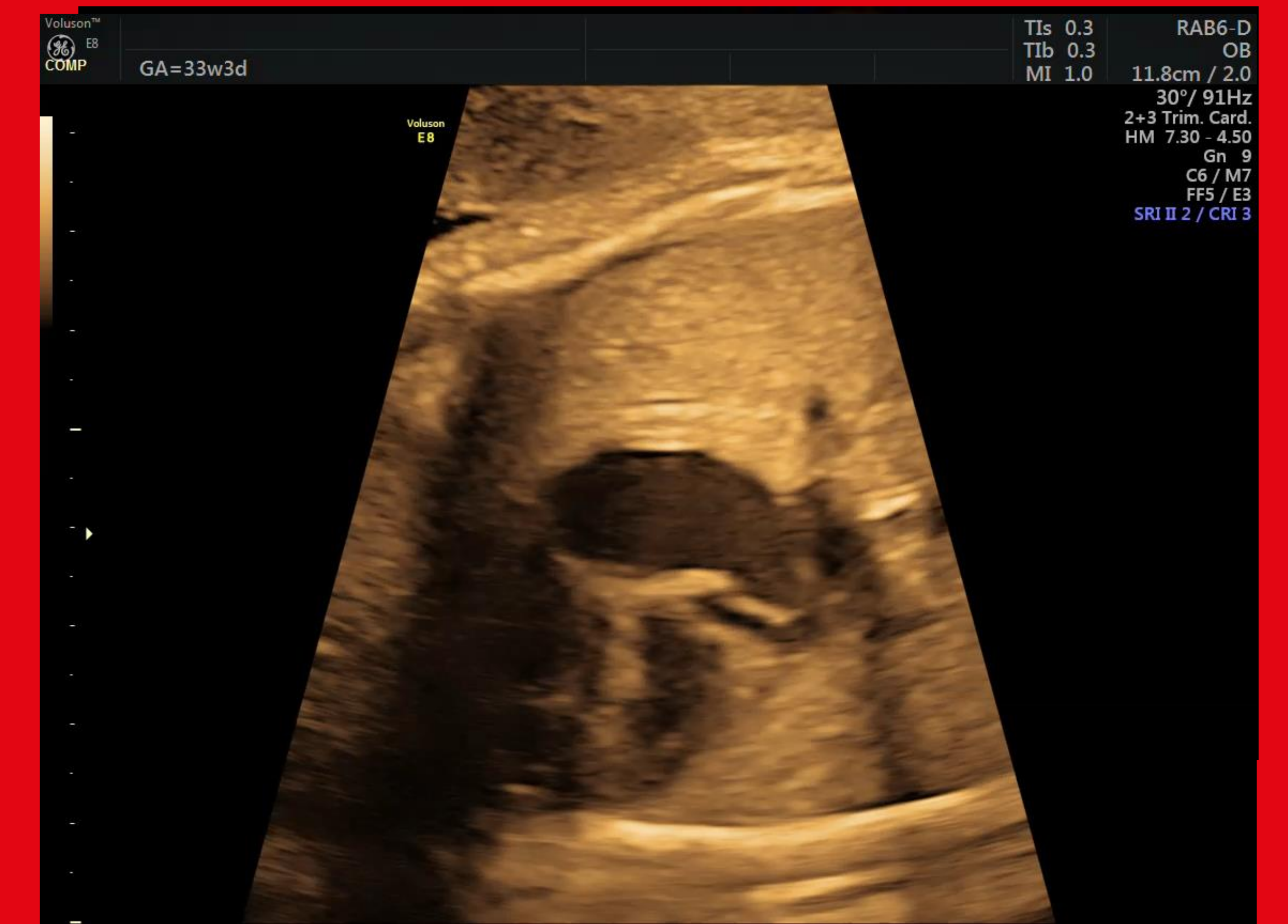


Figure 1. Redundant foramen ovale flap extending toward the left ventricle

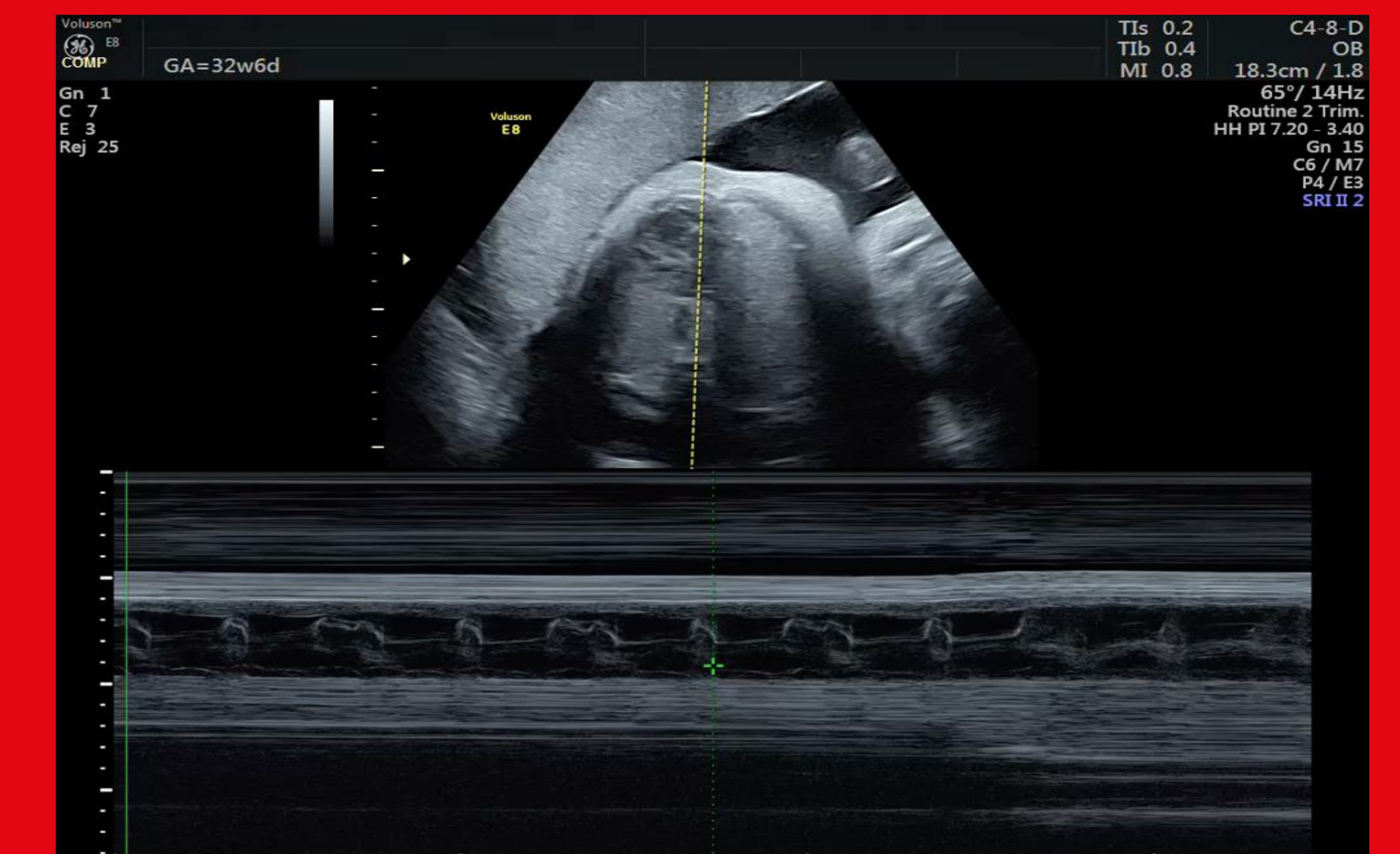


Figure 2. M-mode demonstrating 2:1 atrioventricular block