Recognising spontaneous septostomy and managing its implications in an initially monochorionic diamniotic spontaneous twin pregnancy in regional Queensland

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Background

Spontaneous septostomy is a rare complication of monochorionic diamniotic (MCDA) twin pregnancy.[1] Disruption of the intertwin membrane creates a pseudomonoamniotic environment, increasing risks of cord entanglement and complicating surveillance for monochorionic complications, including twin-to-twin transfusion syndrome and twin anaemia polycythaemia sequence (TAPS).[2,3]

Aims

To improve awareness of spontaneous septostomy, its sonographic recognition, and its management implications in regional Australian practice.

Case

A 26-year-old gravida two woman had spontaneous MCDA twins confirmed at nine weeks' gestation. Subsequent imaging at 17 and 19 weeks raised uncertainty regarding amnionicity, prompting referral to a regional maternal fetal medicine service. At 23 weeks, ultrasound demonstrated a disrupted intertwin membrane with a free-floating membrane edge, normal liquor volumes and cord entanglement, consistent with spontaneous septostomy and a pseudomonoamniotic monochorionic pregnancy.

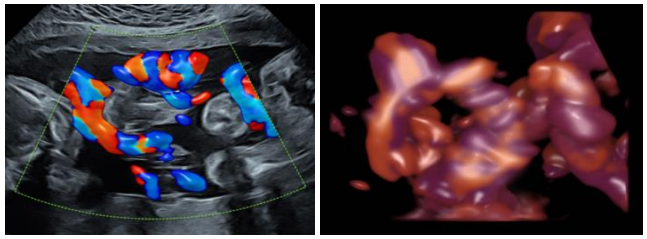

Figure 1: Cord entanglement at 23 weeks

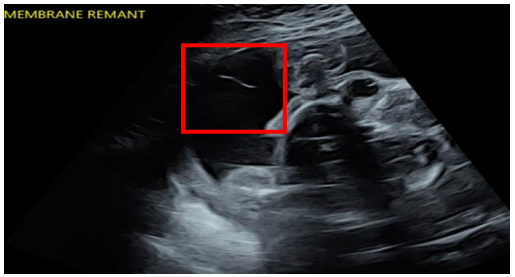

Figure 2: Membrane remnant at 23 weeks

Results

The patient resided approximately 400 km from the nearest maternal fetal medicine unit and underwent fortnightly ultrasound surveillance locally and regionally. At 27 weeks, persistent cord entanglement was identified, with middle cerebral artery peak systolic velocities of 1.00 multiples of the median in Twin A and 1.40 in Twin B, raising concern for evolving TAPS. Weekly surveillance was recommended.[3] At 29+2 weeks gestation, Stage 3 TAPS was diagnosed on ultrasound, prompting urgent transfer for expedited delivery.

Discussion

This case highlights the importance of considering spontaneous septostomy when a previously confirmed MCDA pregnancy later appears monoamniotic. Recognition should prompt intensified surveillance, discussion of risks in line with MCMA pregnancies and timely escalation, particularly in regional settings where distance from specialist care may delay intervention and require carefully coordinated models of shared care.

Acknowledgements

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