

Poster number isuog2026.32c02ea

Universal transvaginal screening for vasa previa in the second trimester: a prospective observational study

Karthik Senthilvel, Raja Ilavarasi Chinnadurai

Introduction

Vasa previa is a critical vascular anomaly where unprotected fetal vessels cross the membranes near the internal cervical os. Conventional practice either avoids routine screening or limits it to high-risk groups (ART, multiple gestation, abnormal cord insertion, resolving placenta previa, bilobed placenta). As **15–20% of cases occur without any risk factor**, this study evaluates the **incidence in a low-risk population**, and the **feasibility and outcomes of universal transvaginal screening** during second-trimester anomaly scans.

Methods

This prospective study (August 2024–March 2026) implemented **universal transvaginal sonographic screening** during routine second-trimester anomaly scans, using a standardized **left-to-right sweep of the internal os** to identify fetal vessels. Among **3124 pregnancies**, all diagnosed cases were **reconfirmed in the third trimester**, received **steroids at 32 weeks**, and were scheduled for **elective LSCS at 34–36 weeks**.

Results

Eight cases of vasa previa were identified (**0.26%**): Type 1 = 3, Type 2 = 1, and Type 3 = 4. Six were singleton pregnancies, two were MCDA twins, and all were spontaneous except one following ovulation induction. **37.5% (3/8) occurred without any high-risk factor**. Seven completed pregnancies were electively delivered at **34–36+4 weeks** with no maternal or neonatal complications. One neonatal death occurred after **PPROM at 26 weeks**. The **prenatal detection rate was 100%**.

Conclusion

Universal second-trimester TVS screening is feasible, fast, and highly effective for detecting vasa previa, including cases without risk factors. Early diagnosis enabled planned delivery and prevented fetal hemorrhage. These results support adopting universal TVS screening in routine anomaly scan protocols, even in high-volume centres.

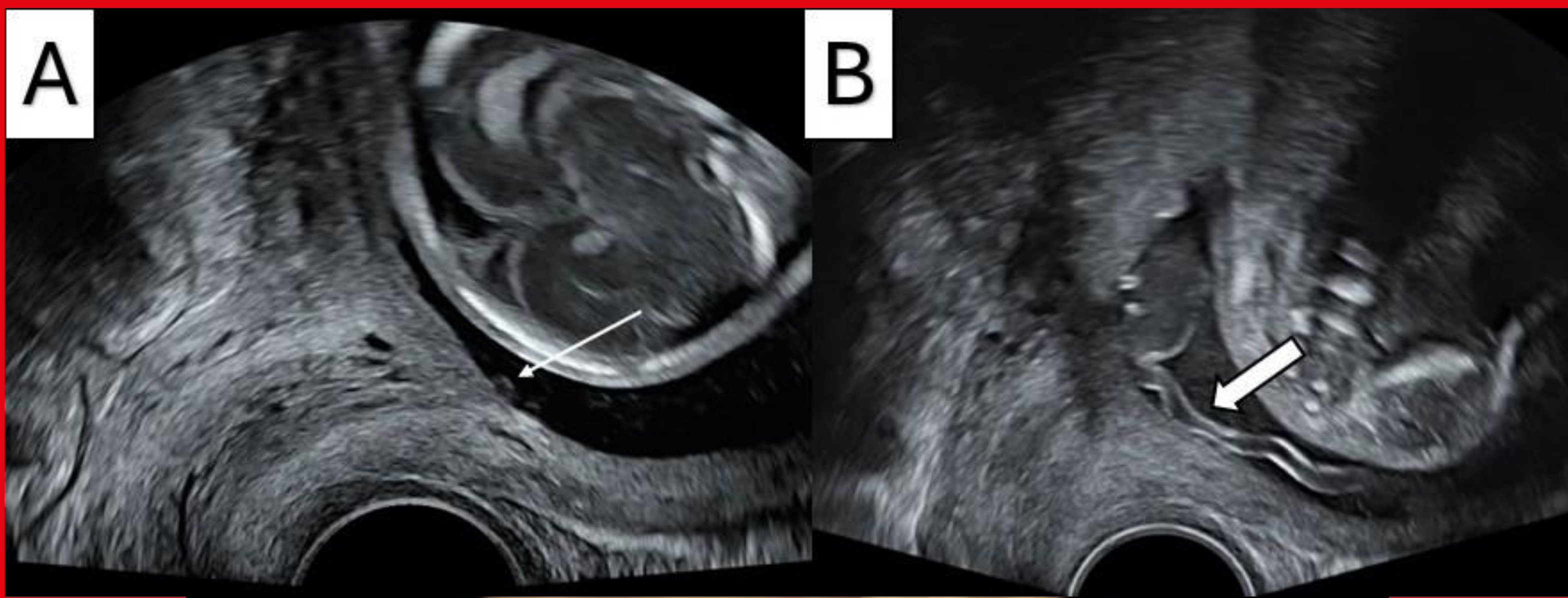


Figure 1. 1A 2D transvaginal midsagittal image showing a vasa previa running from left to right as a small bubble - the “bubble sign”. 1B. 2D transvaginal parasagittal image showing a vasa previa running from anterior to posterior as two parallel vessels - the “tram-track sign.”

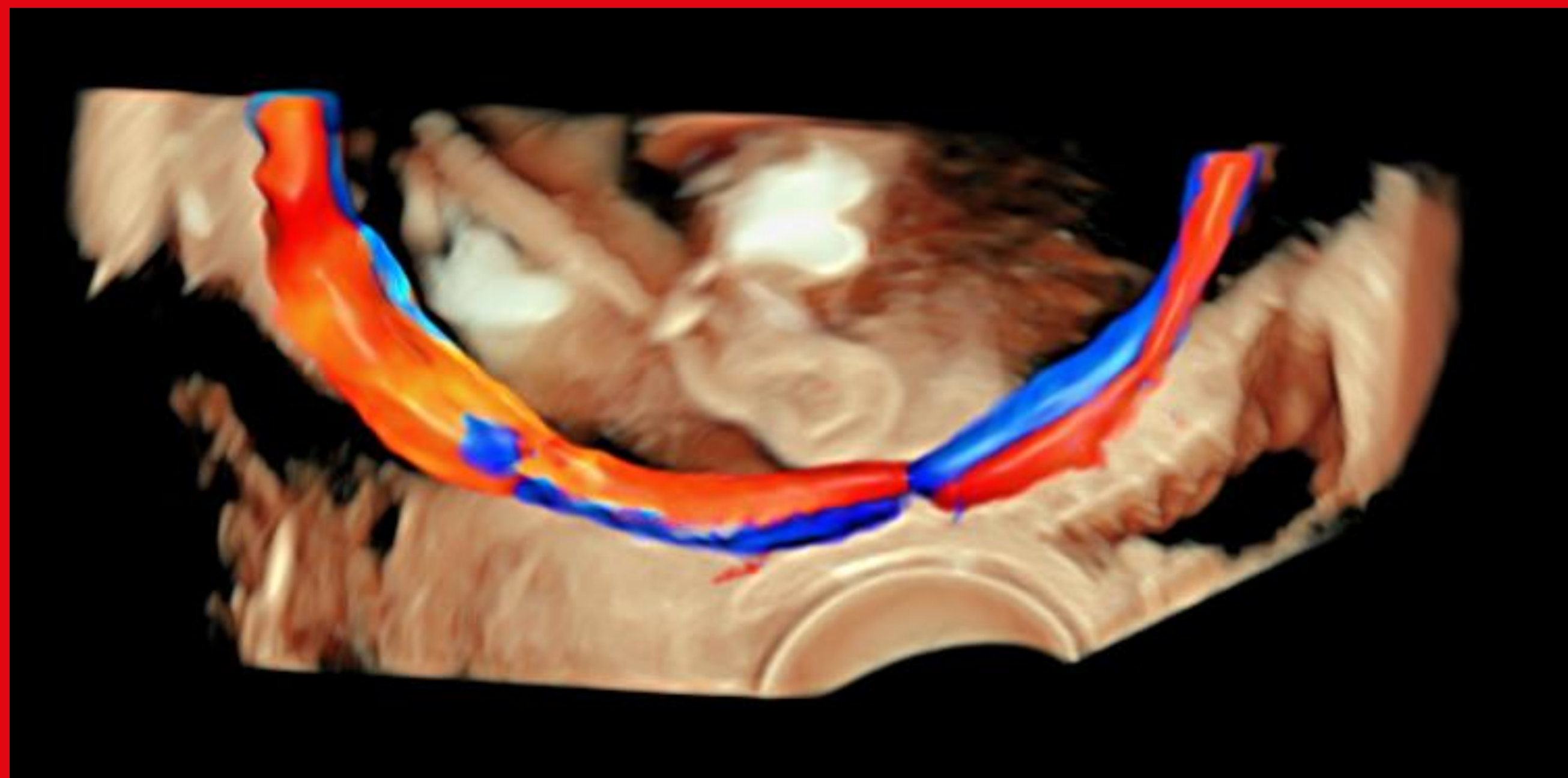


Figure 2. 3D transvaginal parasagittal image with HD flow Doppler showing two vessels running in opposite directions from anterior to posterior as two parallel vessels in different colors.

