

A Case Report of Vasa Praevia Managed in a Regional Referral Hospital

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Introduction

Vasa praevia is a rare but potentially fatal obstetric complication necessitating careful observation, timed delivery, and readiness for emergency birth. Due to its rarity and associated high mortality, patients are often referred to tertiary centres for management. Here we present a case of successful diagnosis and management in a regional referral hospital.

Vasa praevia complicates approximately 1 in 2500-5000 pregnancies, however this number is increasing with the rise of assisted reproductive technologies¹. It is associated with an overall perinatal mortality of 36%; this number varies drastically from 3% when diagnosed antenatally, compared to 66% for those diagnosed intrapartum or postpartum². With a total fetal blood volume at term of 80-100ml/kg, small volumes of blood loss in the event of vessel rupture can rapidly lead to fetal exsanguination. Other complications include compression of the fetal vessel/s, leading to fetal growth restriction or asphyxia, and consequences of preterm birth from emergency or iatrogenic preterm delivery¹.

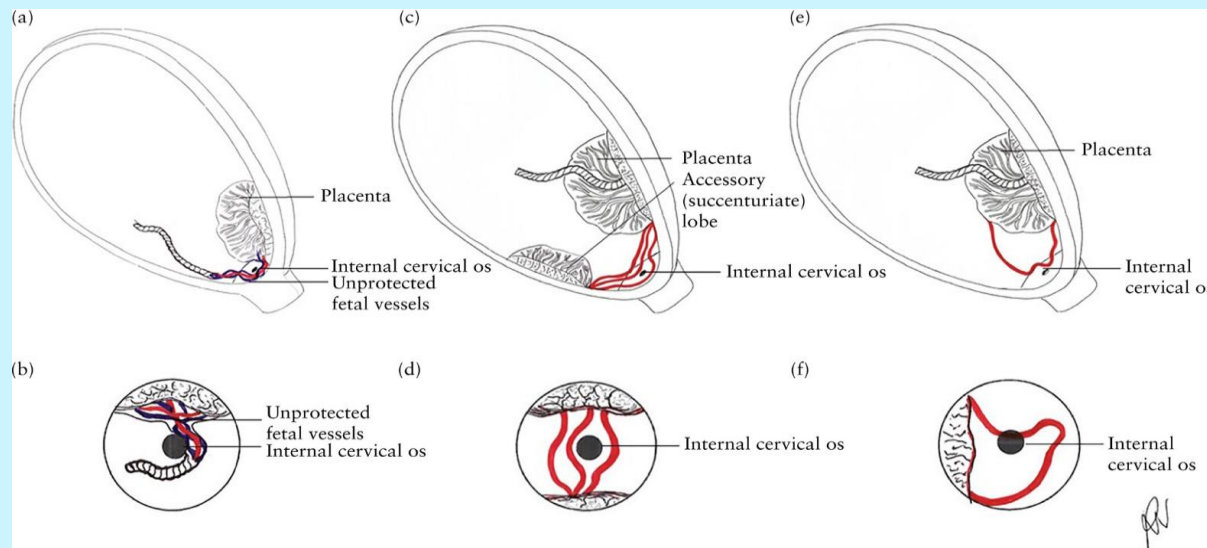


Figure 1: Three pathological mechanisms causing vasa praevia: velamentous cord insertion; succenturiate-lobed placentas; aberrant fetal vessels adjacent to the placental margin, exposed due to para-cervical placental atrophy in mid trimester.

Source: Pozzoni et al, 2024

Case

A 25-year-old primigravida resided in a rural town with Modified Monash score of 5, one hour drive away from a rural referral centre. Antenatal care was provided by a local GP obstetrician. Antenatal history was significant for a borderline low papp-A of 0.33 and intermediate risk of Trisomy 21 (1:283) on combined first trimester screening.

Morphology ultrasound demonstrated suspected vasa praevia at 20 weeks and 28 weeks. The patient was reviewed by a senior obstetrician at the regional referral hospital at 30 weeks. Repeat ultrasound at 32+5 weeks was performed by a locally-practicing obstetric sonologist. This demonstrated vasa praevia with velamentous cord insertion onto the posterior uterine wall, tracking infero-anteriorly across the cervix to the antero-lateral placenta. The patient was admitted for observation from 33+4 weeks, and received corticosteroids, daily CTG, pelvic rest and third-daily group and hold.

The patient remained clinical stable with no antepartum bleeding and normal fetal movements. She underwent elective caesarean section at 36+6 weeks. Caesarean section was performed by a senior obstetrician, anticipating the intraoperative complexities of vasa praevia. The procedure was uncomplicated with estimated blood loss of 600mL. Velamentous cord insertion was clearly visible on placenta at delivery and confirmed on histopathology.

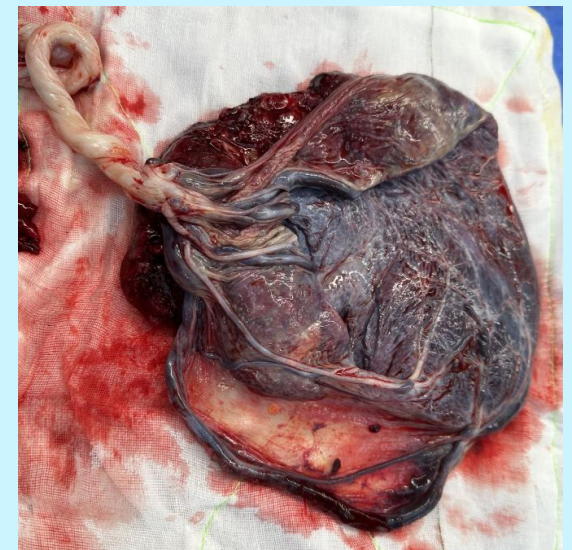


Figure 2: Placenta with velamentous cord insertion visible at time of delivery

Discussion

Antenatal diagnosis and management of vasa praevia has the potential to vastly reduce perinatal mortality. The case presented highlights the successful management of vasa praevia in a regional referral centre and gives scope for future patients to avoid referral to tertiary centres if desired.

References

1. Royal Australian College of Obstetricians and Gynaecologists. (2019) *Vasa Praevia*. Available at: <https://ranzcof.edu.au/wp-content/uploads/2022/05/Vasa-Praevia.pdf> (Accessed: 10 March 2025).
2. Oyelese Y, Catanzarite V, Prefumo F, Lashley S, Schachter M, Tovbin Y, Goldstein V, Smulian JC. Vasa previa: the impact of prenatal diagnosis on outcomes. *Obstet Gynecol*. 2004 May;103(5 Pt 1):937-42. doi: 10.1097/01.AOG.0000123245.48645.98. PMID: 15121568.
3. Pozzoni, M., Sammaria, C., Villanacci, R., Borgese, C., Ghisleri, F., Farina, A., Candiani, M. and Cavoretto, P.I. (2024), Prenatal diagnosis and postnatal outcome of Type-III vasa previa: systematic review of literature. *Ultrasound Obstet Gynecol*, 63: 24-33. <https://doi.org/10.1002/uog.26315>