Obstetric Outcomes Following Vasa Previa at the Royal Brisbane and Women's Hospital: A Retrospective Cohort Study

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Introduction & Aims

Vasa previa is an obstetric condition that refers to unprotected foetal blood vessels which run through the membranes overlying the internal cervical os.[1] These unprotected foetal vessels carry a large hypothetical risk for both the mother and foetus due to uncontrolled bleeding that may occur during labour or rupture of membranes.[2] Recent studies have shown the incidence of vasa previa to affect approximately 1 in 1218 pregnancies and, if left undiagnosed, this condition is associated with an extremely high perinatal mortality rate due foetal exsanguination following membrane rupture.[3]

The aim of this study was to analyse maternal and perinatal outcomes of vasa previa in a quaternary hospital where these patients are delivered.

Methods

This retrospective cohort study analysed 61 women diagnosed with vasa previa during the antenatal period at the Royal Brisbane and Women's Hospital between 2014-2023. Those who were diagnosed during labour or caesarean section were excluded. The data was retrieved from the hospital obstetric database. IBM SPSS was used for statistical analysis.

References

1 Oyelese, Y., Javinani, A. & Shamshirsaz, A. A. Vasa Previa. *Obstet Gynecol* **142**, 503-518, doi:10.1097/aog.0000000000005287 (2023).
2 Derbala, Y., Grochal, F. & Jeanty, P. Vasa previa. *J Prenat Med* **1**, 2-13 (2007).
3 Zhang, W., Giacchino, T., Chanyarungrojn, P. A., Ionescu, O. & Akolekar, R. Incidence of vasa praevia: a systematic review and meta-analysis. *BMJ Open* **13**, e075245, doi:10.1136/bmjopen-2023-075245 (2023).

Results

Antenatal complications commonly observed included decreased foetal movements (12%) and placenta previa with haemorrahge (10%), as well as GDM (10%). PPH was the most common delivery complication (35%). Mothers were admitted at an average gestation of 32.76 weeks (SD 3.88, 95% CI 0.97) and delivered at 34.62 weeks (SD 3.2, 95% CI 0.8). 79% of neonates were admitted to SCN/ICN for prematurity (81%) for an average of 11.55 days (SD 12.2, 95% CI 2.95). There were no maternal, but 1 neonatal death, with 9 APH events recorded. 93% were delivered by C-section (52% Elective, 34% Emergency, 7% Classical) and 7% SVB. Average birth weight was 2500.86 g (SD 647, 95% CI 156.1) with 20% achieving an APGAR <7 and 68% requiring neonatal resuscitation.

Discussion

Vasa previa has high rates of PPH and prolonged hospital stays, with the exceeding majority delivered by caesarean section. Babies were born between 32-35 weeks, with 79% requiring prolonged ICN admission. These results support the adherence to RANZCOG guidelines in the management of vasa previa. Delivering these women in a specialised centre has essentially eliminated maternal and perinatal deaths.

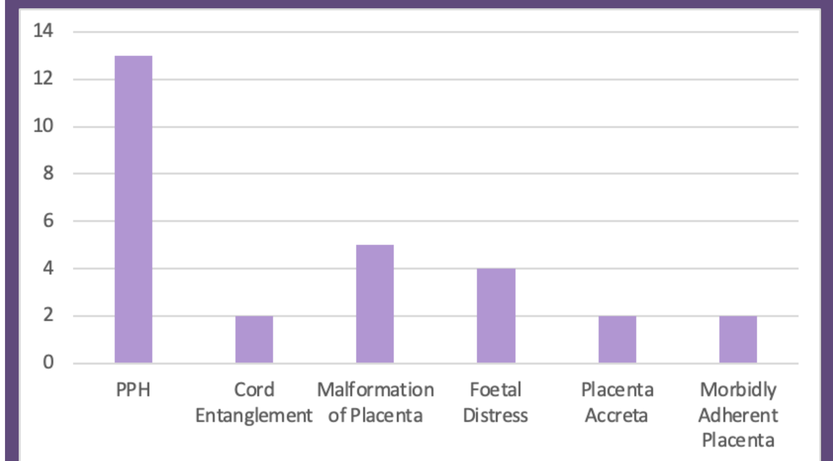

Figure 1: Delivery complications observed in women diagnosed with vasa previa in the antenatal period at the RBWH between 2014-2023 (n=61).

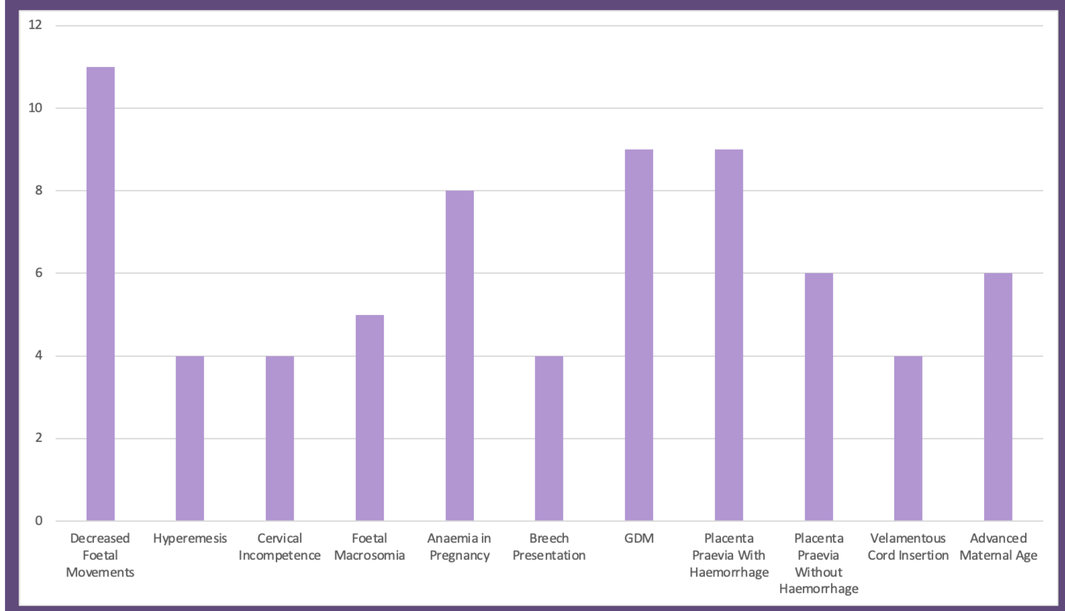

Figure 2: Antenatal complications observed in women diagnosed with vasa previa in the antenatal period at the RBWH between 2014-2023 (n=61).