A Review of Suspected Cases of Uterine Arteriovenous Malformations in a Tertiary Centre

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Introduction

Uterine arteriovenous malformations (AVM) are a rare, but life-threatening cause of abnormal uterine bleeding. Prompt identification and management is a critical to ensure appropriate treatment, however gold standard for diagnosis is MRI[1], which can be difficult to access when compared to pelvic ultrasound (USS).
An increase in requests for urgent MRI to evaluate for AVM prompted an audit into the incidence, risk factors and management of uterine AVMs at the Gold Coast University Hospital.

Indication for initial USS	Number (%)
Menorrhagia	1 (3)
Miscarriage	8 (25)
RPOC	16 (51)
Secondary PPH	4 (12)
?Ectopic pregnancy	1 (3)
?AVM (private USS)	1 (3)

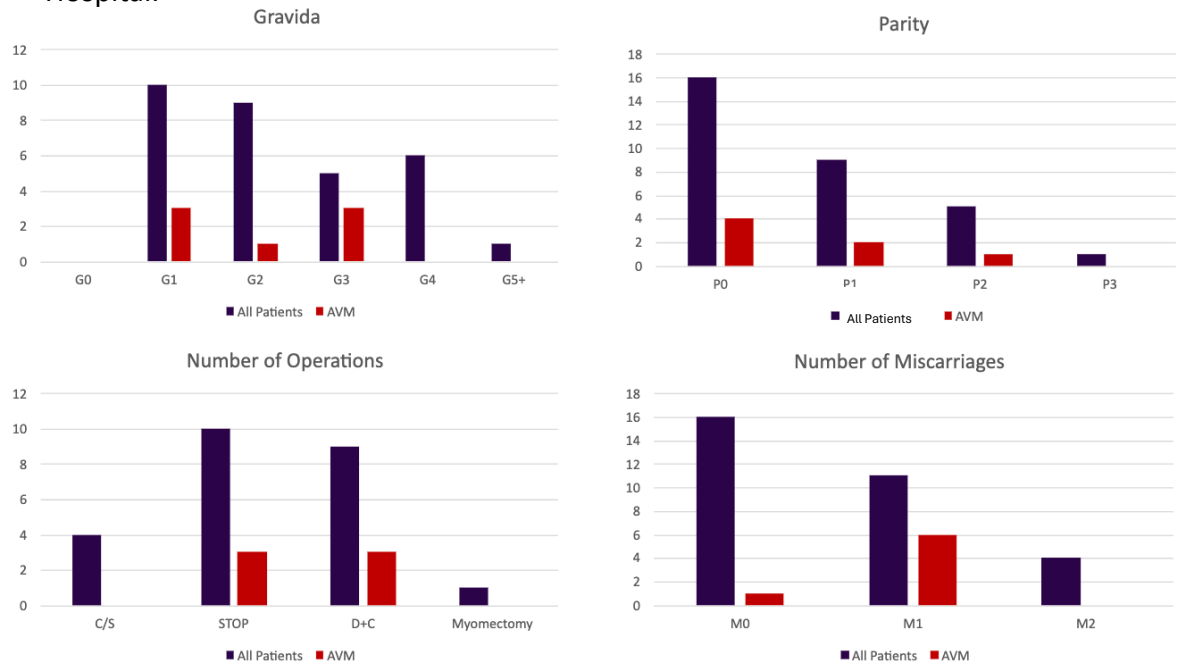

Figure 1. Patient Demographics – AVM vs no AVM

Methods

Patients were retrospectively identified from hospital PACs data between 2018-2022 – underwent USS and MRI at the Gold Coast University Hospital

Results

31 patients were identified as having pelvic MRI performed to evaluate for possible uterine AVM.

- **7 confirmed uterine AVM (23%)**
- 22 retained products of conception (71%)
- 1 retained placenta accreta
- 1 caesarean scar ectopic pregnancy

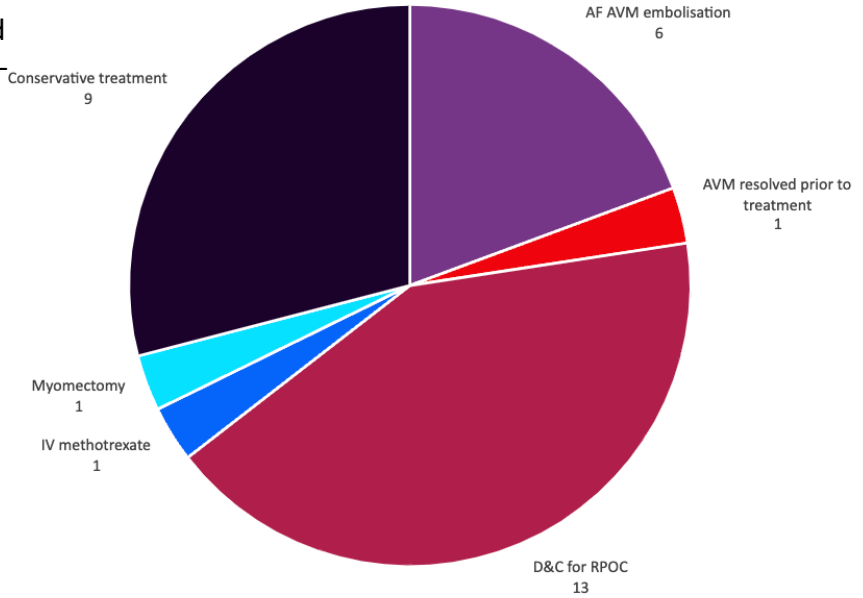

Figure 2. Management following MRI

Discussion

Six of seven cases of confirmed AVM occurred in patients with a previous dilation and curettage or surgical termination, but no cases with previous caesarean or myomectomy. No congenital AVMs were detected. Most cases were confirmed as RPOC, with 76% of ultrasounds requested for investigation for miscarriage or RPOC. In management of confirmed AVM, interventional radiology embolization procedures occurred in 6 of the 7 cases; one AVM resolved on repeat MRI prior to embolization.
Although this is a small patient cohort, due to excluding those who had initial imaging done privately, it does highlight the need for a high degree of clinical suspicion despite the rare incidence of uterine AVM.

When reviewing USS reports, a measured peak systolic velocity (PSV) for uterine masses was helpful, with AVM confirmed on MRI in 42% of cases where this was reported.

References

1. Yoon D, Jones M, Taani J, Buhimschi C, Dowell J. A systematic review of acquired uterine arteriovenous malformations: Pathophysiology, diagnosis, and transcatheter treatment. American Journal of Perinatology Reports. 2015 Oct 12;06(01). doi:10.1055/s-0035-1563721