AVM: An URGENT transfer

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Regional and remote obstetrics and gynaecology provides unique challenges for our General Practitioner Obstetricians and Gynaecologists (GPOs) and Rural Obstetrics and Gynaecology Specialists (FRANZCOG ATPs).

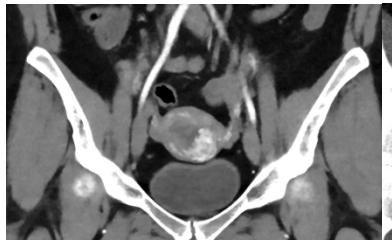
Case

A 36 years old nulliparous woman diagnosed with an intrauterine AVM (Arteriovenous malformation) approximately 3 months after her first miscarriage. Noted on serial scans with ongoing vaginal bleeding. Interhospital transfer accepted from a tertiary facility with interventional radiology. Transferred to a tertiary centre within the day and planning for management initiated promptly.
Uterine artery ligation targeted to culprit vessels supplied by both left and right uterine arteries performed. This was performed on day 2 of admission by interventional radiology.
Closely monitored for one week before being discharged back home. There was no histology to follow-up.

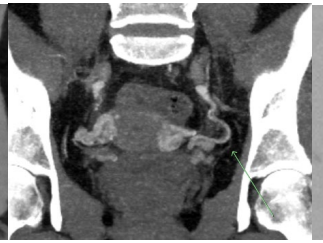
This was only possible due to the meticulous work of the regional team who not only prioritised her case but understood the seriousness of the situation and monitored her closely until serial scans confirmed an AVM. Once her bleeding started, they transferred her immediately. An intervention that may have saved her life and fertility. At her 6-month follow-up she was well, bleeding had ceased, and she had a normal Pelvic MRI, showing no residual vascular anomaly. She was advised on avoiding pregnancy for 9 months.

What are AVMs?

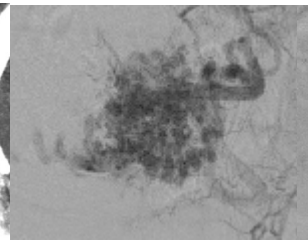
An AVM is a fistula between an artery and vein without a capillary bed between them (1,2). Uterine AVMs are rare and can be either congenital or acquired. Studies have linked AVMs to exposure to diethylboestrol, gynecological malignancy or trophoblastic disease (GTD), or in those with previous pelvic surgeries. It is rarer still for a nulliparous woman, who has never had instrumentation of her uterus (dilatation and curettage, caesarean section and GTD carrying the highest risk), to acquire an AVM and this should raise suspicion of malignant aetiology (1,2,4). However there are documented cases of miscarriage related AVMs, whereby due to retained products of conception and nonobliteration of the connections created by the placental bed- AVMs can persist or pre-existing congenital AVMs can proliferate under the action of human chorionic gonadotropin.



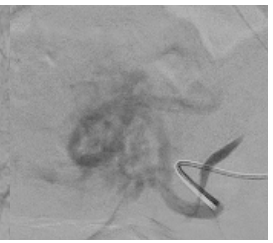
Pre-embolization contrast CT showing intrauterine hypervascularity



Mapping of hyper-attenuated vessels for targeting embolization by interventional radiology



Angiogram of the left uterine artery – showing filling of AVM



Post embolization angiogram of the left uterine artery showing no filling of the AVM.

Current treatment options are fairly limited to embolization or hysterectomy (1,2,4). Although there are documented rare cases of medical management in situations where the embolization could result in loss of fertility, there is insufficient evidence at this stage to consider it an option where embolization is safely possible (3).

This case highlighted the importance of providing our GPOs with a breadth of exposure to complex cases so that they can make prompt and safe decisions for their patients. Busy tertiary centres can often get bed blocked; this can be an added challenge for isolated remote practitioners. Often this can delay transfers therefore delaying preventative treatments. To overcome this, referrals need to be clear, concise and effective to facilitate timely transfer of patients and to provide acute management in complex cases.

Therefore, highlighting the importance of GPOs in regional and remote centres to get training that provides them with adequate exposure to complex gynaecological issues so that they can identify and triage appropriately – this facilitates the best outcomes for the patients.

Our GPOs and do an excellent job of looking after their patients in remote and regional centres, we need to support them with training opportunities in tertiary centres where they can be exposed to a breadth of complex cases and understand their care.

Therefore, facilitating equitable health care access to all.

References:
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3. Wong, C., & Anand, S. (2023). Medical Managemetn of a Complicated Uterine Arteriovenous Malformation with Successful Fertility Preservation. Perth: RANZCOG ASM 2023. Retrieved from https://ranzcogasm.com.au/wp-content/uploads/2023/11/PresentationPoster_50_1001094651.pdf
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This case has been presented with consent from the patient. However specific identifiers have been withheld for patient privacy and confidentiality.