

BACKGROUND

Uterine arteriovenous malformations (UAVM) are rare but potentially life-threatening vascular lesions. We describe a case series of four acquired UAVMs (aUAVM) following surgical management of early pregnancy. All patients underwent uterine artery embolisation (UAE). This successfully resolved the UAVM in all four cases described in this series.

TABLE 1: CASE DEMOGRAPHICS, PREVIOUS OBSTETRIC HISTORY AND CASE

	Case 1	Case 2	Case 3	Case 4
Previous Obstetric History	Two Lower Segment Caesarean Sections (LSCS)	Two LSCS, one vaginal birth	One LSCS, one SMM	Two LSCS
Current Pregnancy	Unsuccessful medical TOP of 1 st trimester pregnancy	Unsuccessful medical TOP of 1 st trimester pregnancy	Unsuccessful conservative management of 1 st trimester pregnancy loss	Unsuccessful medical TOP of 1 st trimester pregnancy
Surgical Intervention in this pregnancy	Electric Vacuum Aspiration	Surgical Termination of pregnancy (STOP)	SMM	STOP
Surgical Difficulties	450mLs blood loss, uterotonics and bimanual required	1200mLs blood loss, intra-uterine balloon required	2,100mLs blood loss, intra-uterine balloon required	2,800mLs blood loss with adherent pregnancy tissue
Timing of Re-Presentation (days)	11	37	17	Post STOP: 5 Post repeat procedure: 12
Presenting Issue	PV bleeding - heavy	PV bleeding - heavy	PV bleeding	PV bleeding – heavy and circulatory shock
Management	UAE	UAE	UAE	Repeat surgical management UAE
Post UAE Course	Recurrence of UAVM with repeat UAE performed	Uncomplicated	Uncomplicated	Uncomplicated
Contraception	Contraceptive implant	Depo-provera injection	Declined	Declined – partner had vasectomy

Acquired uterine arteriovenous malformation following surgical management of early pregnancy: A Case Series

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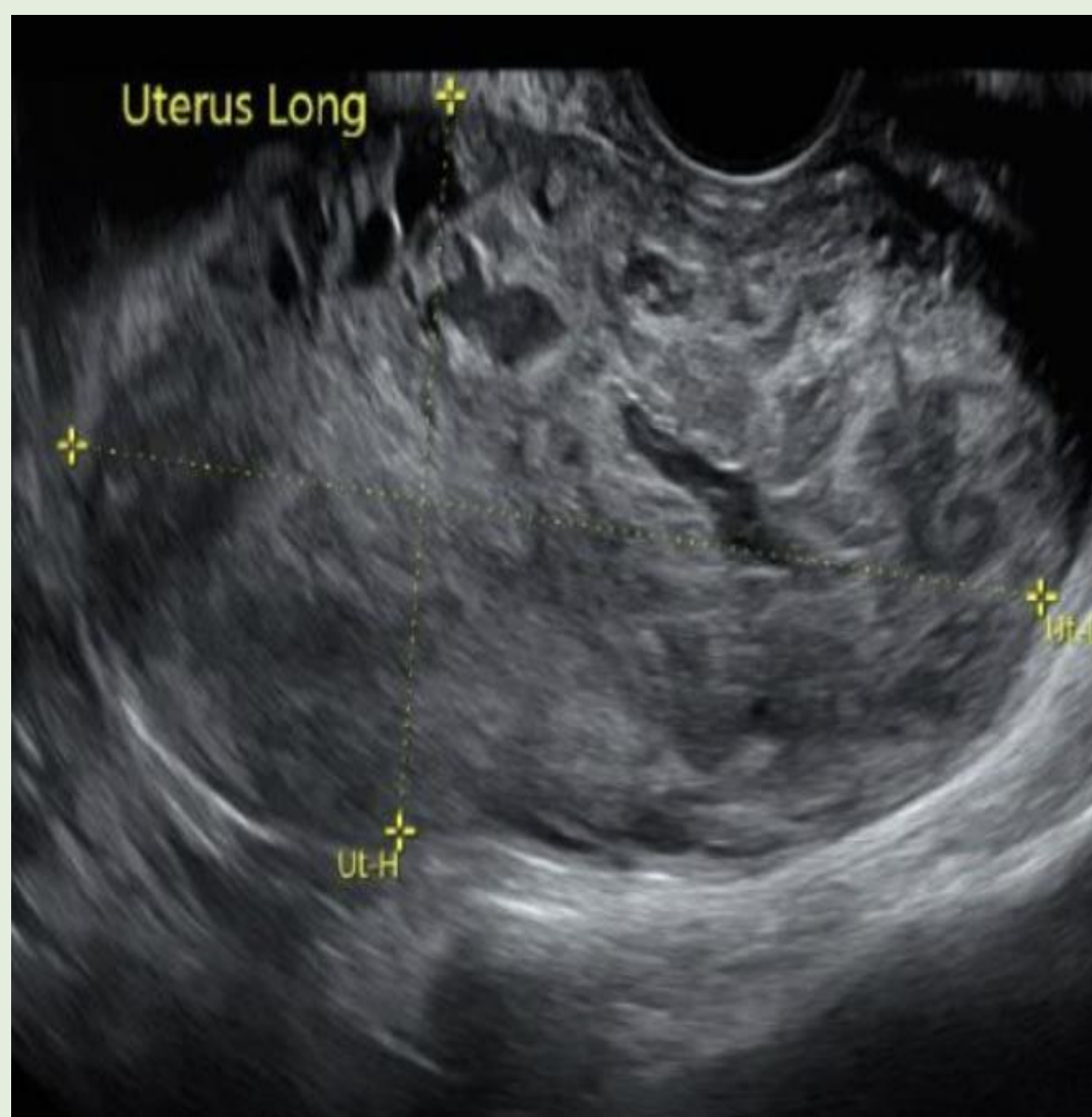


Figure 1.
Transvaginal ultrasound with longitudinal view of the uterus, demonstrating a large heterogenous mass replacing the anterior wall

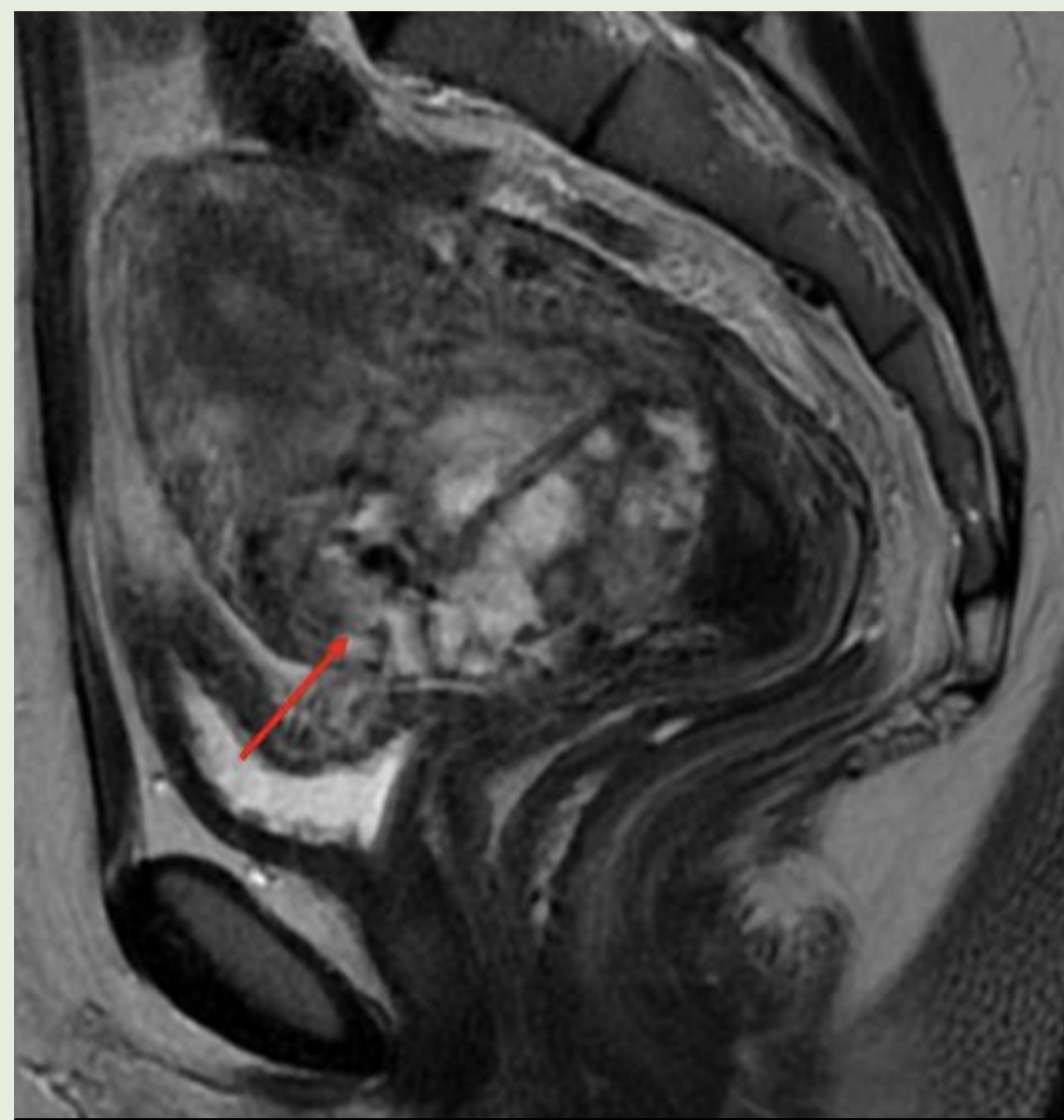


Figure 2.
Sagittal T2 weighted MRI pelvis at initial diagnosis, showing large heterogenous, hypervascular mass replacing anterior wall of the uterus.

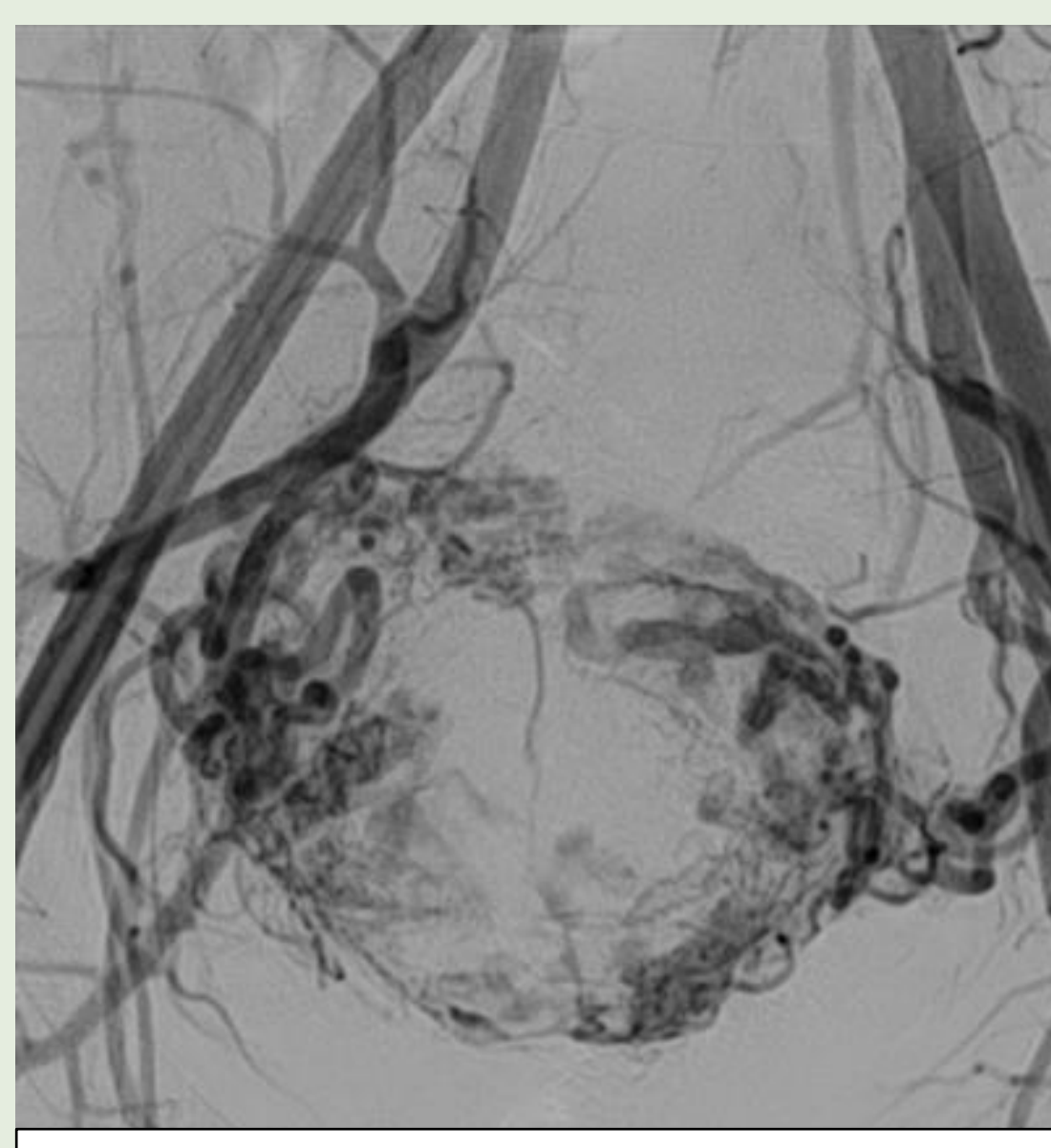


Figure 3.
Digital Subtraction Angiography (DSA) of the pelvis pre embolization demonstrating a large UAVM with bilateral supply

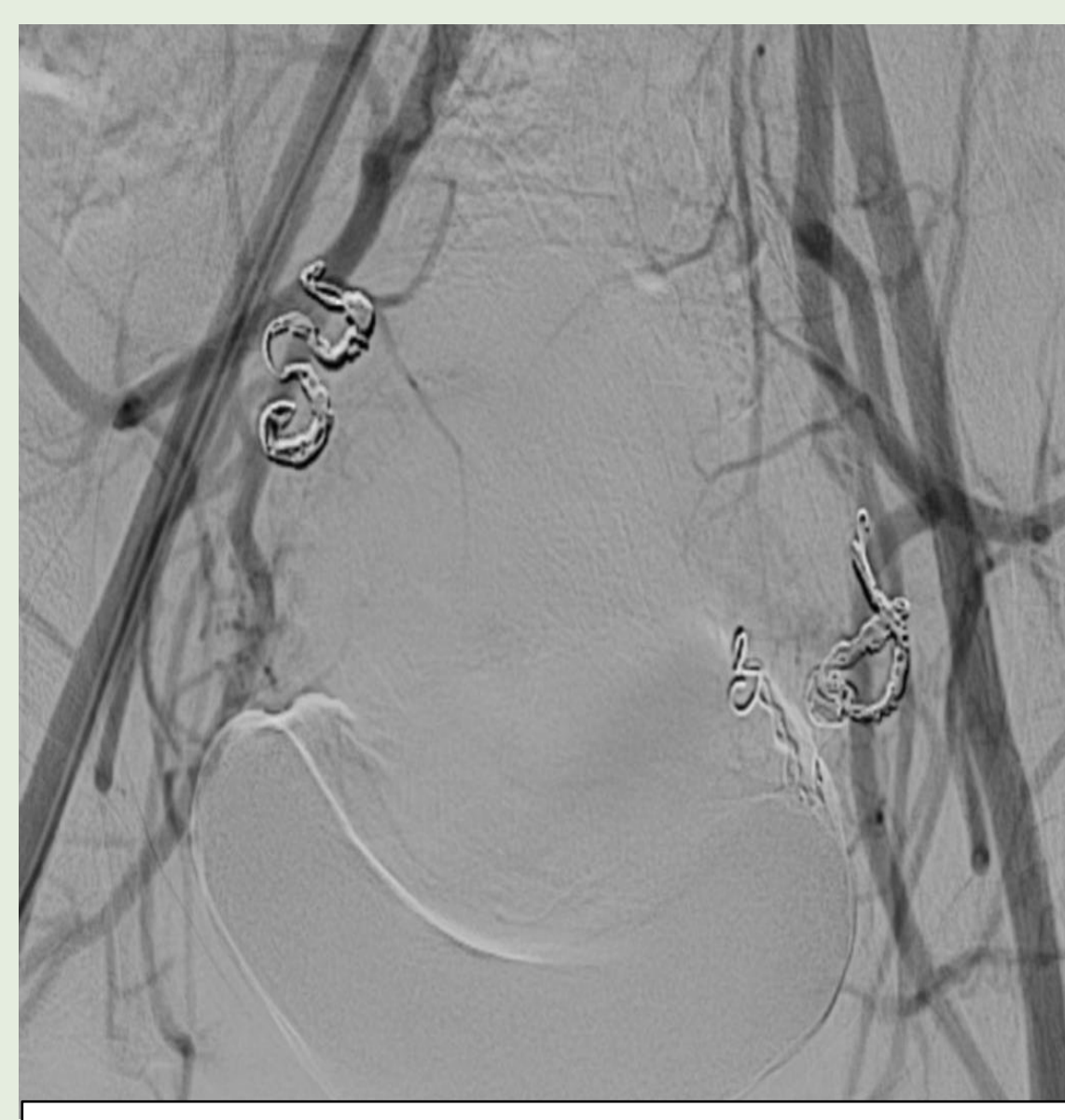


Figure 4.
Post embolisation DSA, demonstrating complete devascularisation of the UAVM with coils noted bilaterally

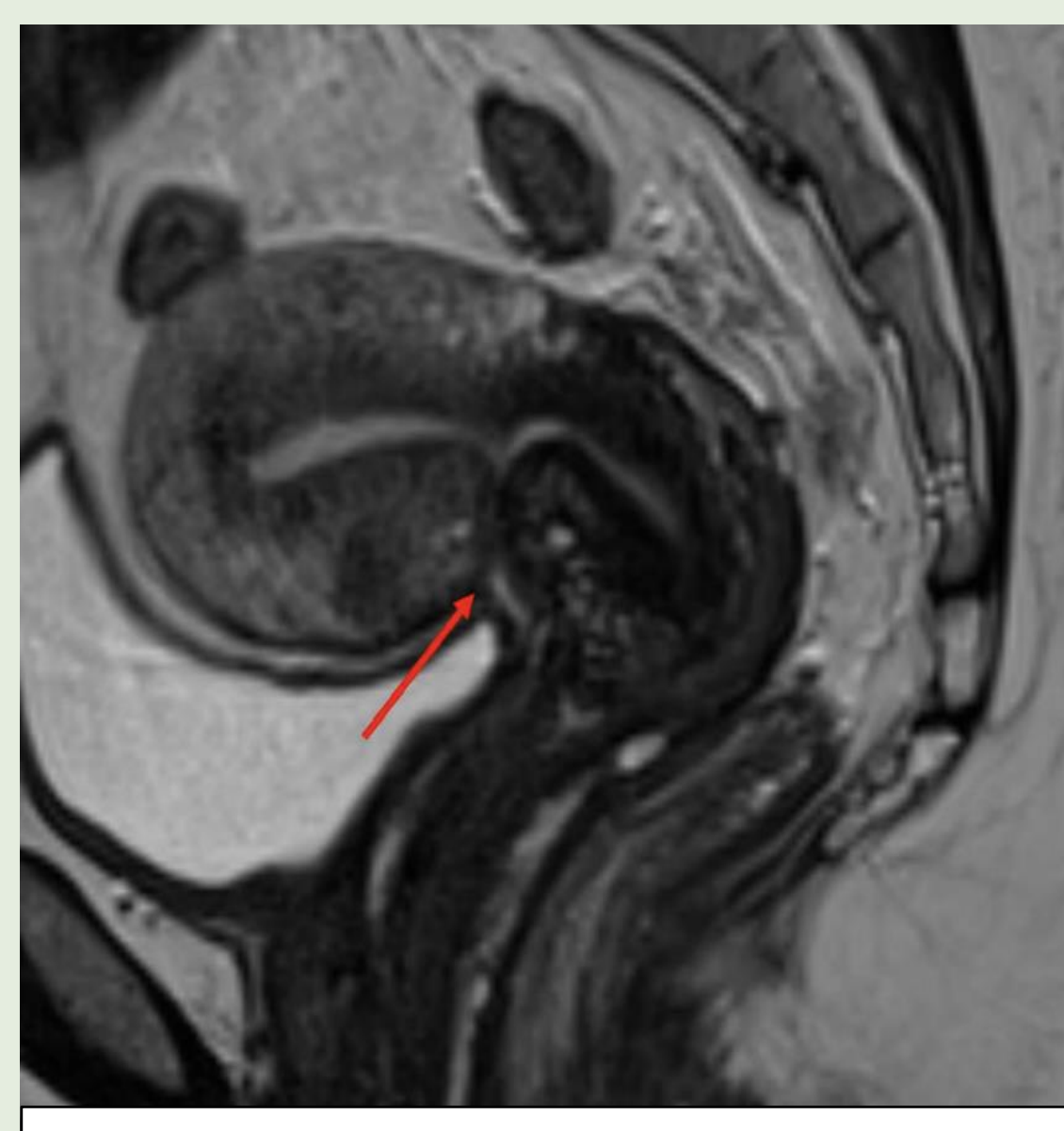


Figure 5.
Sagittal T2 weighted MRI demonstrating complete resolution of the AVM. Previous caesarean section scar noted (red arrow)

CASE DESCRIPTIONS

Four women aged 31–42 years of age developed UAVMs following surgical management of early pregnancy (SMM). All cases were complicated by significant or recurrent post-procedural vaginal haemorrhage, with initial imaging or clinical diagnosis occasionally non-specific (Figure 1). Case 1 developed recurrent haemorrhage following evacuation and required repeat bilateral UAE. Case 2 had an adherent gestational sac adjacent to a previous LSCS scar, complicated by major haemorrhage and subsequent circulatory shock before UAVM was confirmed on CT. Case 3 experienced severe haemorrhage at SMM, with initial imaging inconclusive for UAVM before repeat imaging and MRI confirmed the diagnosis. Case 4 presented with recurrent major haemorrhage and haemorrhagic shock following second-trimester STOP. All four patients were successfully treated with bilateral UAE, with subsequent imaging demonstrating complete resolution (Figure 2-5). Further similarities and differences between the cases are outlined [Table 1].

CONCLUSION

AUAVM is a rare but potentially life-threatening complication following surgical management of early pregnancy. A high index of suspicion is essential when heavy bleeding occurs following uterine intervention, usually after or within fourteen days. Prompt MRI or CT angiography, may facilitate diagnosis and allow for effective management. In this case series, bilateral UAE was successful in all four cases, providing effective, uterine-sparing treatment with complete radiological resolution. Careful counselling regarding contraception and future pregnancy is essential, as obstetric outcomes following UAE remain uncertain.