

# A Misdiagnosed Molar Pregnancy Ended Up in Excessive Haemorrhage Which was Later Diagnosed as a Uterine Arteriovenous Malformation

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## ABSTRACT

Uterine vascular abnormalities though are not very common but are potentially life threatening as can lead to torrential vaginal bleeding. Although they are considered relatively rare, with fewer than 150 cases reported in the literature, a true incidence of the uterine AVM may be much higher. We are reporting a case which was diagnosed as molar pregnancy and suction curettage was done, at the time of the evacuation there was excessive bleeding which was immediately dealt with the tamponade by the Foleys catheter and the vaginal packs till the arrangements for the uterine artery embolization were done. At the time of embolization right uterine artery arteriovenous malformation was detected incidentally and embolized along with the uterine arteries. The post op recovery of the patient was uneventful.

Retrospectively when the Doppler ultrasound was reassessed hypochoic lesions and dilated veins were seen in the myometrium which were misdiagnosed as molar.

In any patient if the myometrium shows dilated veins and on Doppler if abnormal active vessel flow with a coloured mosaic pattern is detected uterine AVM should be suspected and should be investigated further with the computed tomography (CT) for proper treatment of the patient and prevention of the life-threatening haemorrhage.

**Key Words:** Uterine artery embolization, haemorrhage, dilatation and curettage. Uterine AVM

## INTRODUCTION

Uterine vascular abnormalities though are not very common but are potentially life threatening as can lead to torrential vaginal bleeding. Although they are considered relatively rare, with fewer than 150 cases reported in the literature, a true incidence of the uterine AVM may be higher. <sup>(1)</sup> A wide range of the vascular abnormalities of the uterus can be found. <sup>(2)</sup> Broadly they are divided in to two types of the abnormalities, those effecting the uterus itself and those involving the placenta e.g., chorioangioma. Although rare but the most frequently found vascular disease of the

uterine arteries are the arteriovenous malformations (AVM) which result from one or more sites of abnormal direct communication between an artery and a vein without an intervening capillary bed, <sup>(1)</sup> fistulas, true aneurysms and pseudo aneurysms. <sup>(3-6)</sup> Uterine AVM are usually congenital and can be seen more commonly in pregnant patients. <sup>(3)</sup> Acquired uterine AVM is most frequently seen after uterine trauma which can induce the formation of the abnormal vascular communications between the arteries and the veins during the process of healing. <sup>(7-8)</sup> Although uterine trauma associated with pregnancy such as

dilatation and curettage (D&C), prostaglandin E1 (PGE1) induced abortion, cesarean section and vaginal delivery have all been listed as the primary causes of the acquired uterine AVM, few cases have been reported after uterine tumours (endometrial and cervical carcinoma), gestational trophoblastic disease (GTD), uterine infections and even after the use of intra uterine contraceptive devices (IUCD).<sup>(7-9)</sup>

The rationale of reporting the case is to emphasize the importance of suspecting the uterine AVM if the myometrium shows dilated veins and on doppler if abnormal active vessel flow with a coloured mosaic pattern is detected. Whenever there is suspicion of uterine AVM, it should be investigated further with the computed tomography (CT) for proper treatment of the patient and prevention of the life-threatening haemorrhage.

## CASE REPORT

A 31 years old Middle Eastern female who was pregnant for the second time presented at gestational age of 8 weeks with history of off and on mild vaginal bleeding. She had history of previous one caesarean section due to breech which was done 19 months ago.

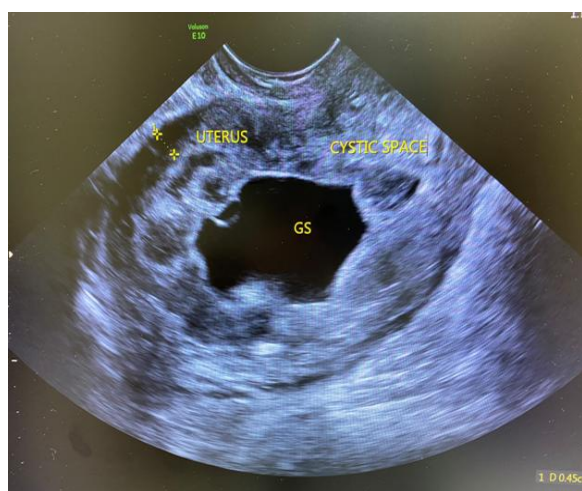


Figure 1: A transvaginal ultrasound showing the empty gestational sac

Her BHCG was 928.90 mIU (milli international units) and on ultrasonography (USG) single intrauterine gestational sac was seen and no embryo was detected. The

cystic spaces around the gestational sac raised the suspicion of molar pregnancy as shown in figure 1.

The couple was counselled about the diagnosis and treatment options discussed. The patient was admitted for the suction curettage.

On the day of the surgery after the patient was given general anaesthesia, she was put in lithotomy position. The area was scrubbed and the patient was draped. Her bladder was emptied with the help of the catheter and bimanual examination was done. The examination revealed 10week size anteverted uterus with open cervical os. Suction curettage was done and uterine contents were taken for histopathology. Excessive bleeding was noted at the time of the suction. USG was done for the confirmation of the empty cavity after ruling out perforation.

The objective assessment of the blood loss revealed 2.1 litres of the loss. An 18 French Foleys catheter was placed intrauterine to create the tamponade effect and was filled with 28cc of normal saline. Vagina was then packed with 2 roller gauzes with a knot. The vaginal pack started getting soaked, the haemoglobin dropped from 11.4 gm% to 7.1gm%. So, the decision of uterine artery embolization was made. The couple was counselled and the patient was shifted to Cath lab for the uterine artery embolization after taking the informed consent. During uterine artery embolization the right uterine AVM was diagnosed incidentally and was embolized. Two units of blood were transfused one before and one after the uterine artery embolization. The bleeding stopped after the embolization.

The patient remained stable on the operation day and thereafter. After 24 hours of the UAE the fully soaked vaginal packs were removed and the uterine Foleys was removed as well. The patient was closely observed thereafter. She remained stable and no vaginal bleeding was observed.

Her post op haemoglobin on the first post op day was 9.1gm%. She received one dose of two amp of injection ferric

carboxymaltose in 300cc of normal saline on the second post op day. Her post op recovery was uneventful and she was discharged in stable condition on day 2 of the procedure.

Retrospectively, the Doppler USG was seen and abnormal colour doppler showing active myometrial flow was detected raising the suspicion of uterine AVM.

As shown in figure 2.

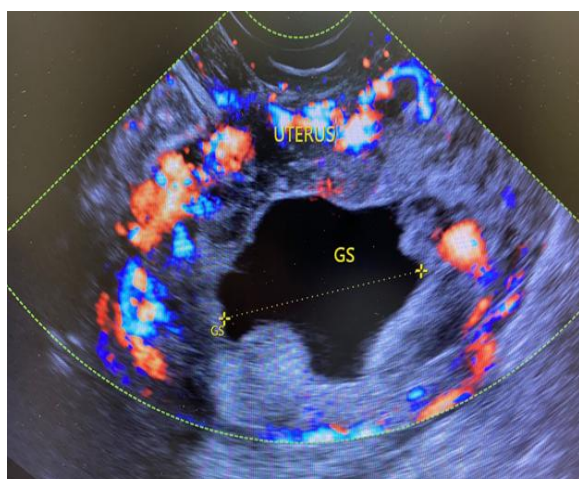


Figure 2: A transvaginal ultrasound showing the empty gestational sac with abnormal active vessel flow in the myometrium

## DISCUSSION

The acquired uterine AVM which was detected in this patient could be the result of the previous uterine trauma (the caesarean section). In this patient the reason of the excessive haemorrhage was the iatrogenic sloughing of the endometrium during the suction curettage which led to the massive bleeding suggestive of arterial haemorrhage. (10) Many imaging techniques like ultrasonography, CT, and magnetic resonance imaging (MRI) have been used for diagnosing the uterine AVM, although in recent practice the colour Doppler USG is considered as the modality of choice because it increases the accuracy of the diagnosis. (11)

The GTD is a very important differential diagnosis due to the hypervascularity and turbulent flow.

The management of the patients with uterine AVM depends upon the amount of the vaginal bleeding, hemodynamic stability

and desire of the patient to have more kids. Although hysterectomy is the definitive treatment for the patients who think that their family is complete, but more conservative approach is needed because the uterine AVM is encountered by the patients in reproductive age. (12) If the amount of the blood loss is minimal medical management can be offered to the patients in the form of danazol or gonadotropin releasing hormone (GNRH) analogue. (13,14)

Since the first report of trans arterial embolization (TAE) as a conservative choice for the patient by Frossman et al, (15) this technique has been used widely for the uterine AVM treatment. Due to the high clinical success rate of TAE and low complication rates in the literature (7,16,17) TAE is recommended to be the first choice for the management of the patients with the uterine AVM (18) whereas hysterectomy should be kept as a treatment of choice for the patients in which the alternative treatment fails or the patient has recurrent heavy bleeding. (19)

In the current case report the patient was initially misdiagnosed as molar pregnancy due to positive BHCG, presence of the gestational sac and hypervascularity. During the suction curettage when excessive haemorrhage was encountered then the patient was shifted for UAE after the packing and the uterine AVM was diagnosed incidentally which was treated by doing the embolization of the vessels.

## CONCLUSION

The uterine AVM are though rare but can be associated with the life threatening torrential vaginal bleeding so should be suspected in every patient with excessive vaginal bleeding after delivery or after any uterine procedure.

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