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A case of Retained product of conception mimicking Uterine Arterio-Venous Malformation.

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Abstract

Uterine Arterio Venous Malformation is defined as the rare pathology and difficult to quantify, with approximately 100 cases reported in the literature. Yazawa & O'Brien suggested pelvic sonographies of patients to rule out cause of uterine bleeding, reported variable incidences of Arterio Venous Malformation 4.5% and 0.6% respectively.(**2**) Main Pathophysiology is formation of direct communication amongst uterine arteries and veins & absence of intervening capillaries. It is life-threatening as profuse bleeding per vagina is the typical presentation. In this article, 32 year female G2P1L1 (Urine Pregnancy Test was done in the hospital) with amenorrhea since 2 months followed by vaginal bleeding since 20 days. Ultrasound of pelvis -increased vascularity with involving vessels of sub-endothelium and myometrial and Retained Products Of Conception, which complicated the diagnosis. She was investigated. As she was hemodynamically stable, she underwent expectant management and responded well.

Keywords: arteriovenous malformation, uterine artery, dilatation & curettage, Manual Removal of placenta

Introduction

Arterio Venous Malformations (AVM) are direct communication of the arteries and the veins, usually absence of intervening capillary vessels.(1,2) Etiology can be either congenital or acquired. In Acquired AVM basic of cause is history of injury to uterine wall resulting from repeated curettage of uterus, C-section, Pelvic Inflammatory Disease (PID), RPOC, Gestational Trophoblastic Neoplasia (GTN), malignancy. In Congenital AVMs of uterine defect lies at the level of differentiation of endometrium. Selection of treatment option depends on the hemodynamic stability, size, location, severity of symptoms, age , preservation of fertility & expertise. Investigation of choice is ultrasound with Doppler. MRI aid in diagnosis of AVM, while digital subtraction angiography is the gold standard. The treatment modalities available like uterotonic drugs, contraceptive pill, tamponade, surgical resection, embolization of uterine artery and emergency hysterectomy. Timmerman et al. in his study suggested six out of ten cases of AVM got cured on their own (**3**)

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Case Report

A 32-year-old G2P1L1 visited the outpatient with pain in lower abdomen and vaginal bleeding since 20 days. She had obstetric history of one living child who was delivered preterm at 32 weeks. After delivery of fetus, she underwent manual removal of placenta. As per LMP, she was 8 weeks 3 days of gestation with Urine beta hCG tested positive. At the time of first visit, her vitals were normal with Hb of 11.5 g/dL. Pelvic examination showed bleeding per vaginum present and anteverted uterus of 6-8week size and fornices were free, nontender. Ultrasonography of abdomen & pelvis showed Uterus of 8*3.8*5.5 cm.

On the day of admission TVS was suggestive of a mass which was ill-defined heterogenous hypoechogenic lesion of 2.7×1.7×2.1 cm-sized (with 5ml volume) at the fundus ?retained products of conception doppler suggested areas of internal & peripheral vascularity diagnosis of ?uterine AVM at the uterine fundus & RPOC in the uterine cavity. Raised vascularity in subendometrial vessels and involvement of myometrium was noted. Endometrial thickness -1.7cm and normal adnexa as shown figures 1 and 2.

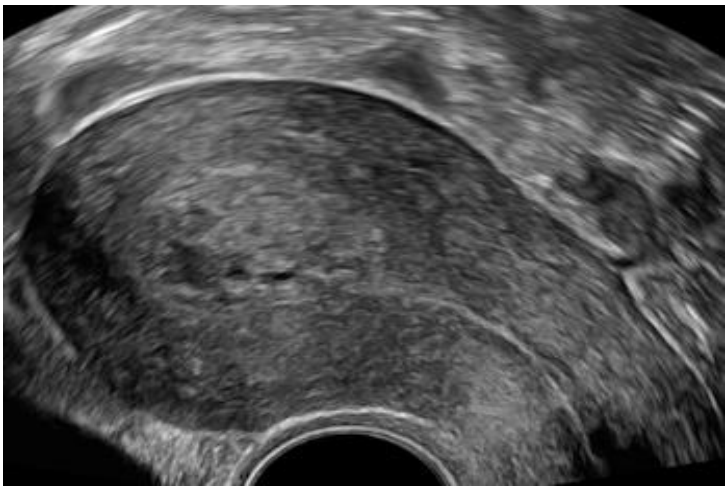

FIGURE 1

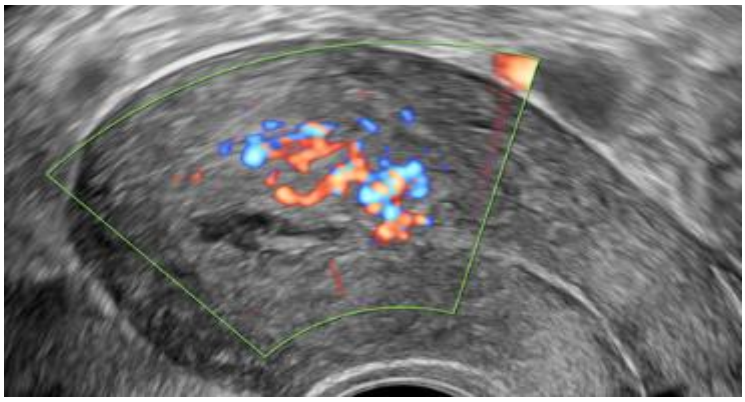

FIGURE 2

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We managed patient conservatively, with Inj.Methotraxate 1mg/kg stat and Tab.Misoprostol 200mcg BD for 3 days, Patient was observed closely in the ward. Complaint of Vaginal bleeding reduced on day 7. No curettage was performed. Also, serial beta hCG levels monitored which dropped from 116mIU/ml to 39.47 mIU/mL on the day of discharge. On follow up on post 21 days she came to OPD with Ultrasonography report suggestive of Normal Endometrial Cavity with serum beta hCG was 2.2 mIU/mL.

Discussion

Dubreuil and Loubat, et al. reported 1st case of AVM in 1926 [**1,2**]. There is not enough literature available for AVM. Cases reported of AVM in which patients presented with severe bleeding per vaginum causing hemodynamic instability. Thus, prompt diagnosis and immediate treatment in case of unexplained vaginal bleeding is mandatory. With Radiologic advancement and increased awareness of uterine AVM as a pathological entity, the diagnosis of uterine AVM has become more common. Acquired uterine AVM was rare entity but in modern obstetrics with increase intervention, easy availability of suction and curettage, increasing rate of C-Sections, preterm births leading to drastic increase in manual removal of placentas causing increased trauma to uterus. Through this case, one should consider the fact that history of manual removal of placenta in previous delivery can become risk factor for acquired uterine AVM, especially in subsequent pregnancy. Earlier AVM was diagnosed only after histopathological examination of the uterus after hysterectomy was performed. Nowadays, Gold standard test is Angiography but it is invasive test. Currently color doppler along with ultrasonography has become useful tool in case of emergency [**4**].Vascularity of anechoic uterine lesions can be easily appreciated with doppler. Angiography usually performed on patients requiring surgical intervention or embolization, not used as a routine investigation. In uterine AVMs, plain ultrasonography usually shows the subendometrium and myometrium contains spongy hypoechoic spaces; which should be differentiated from RPOC, hemangioma, GTN, ovarian cysts or hydrosalpinx. [**5,6,7**]. It was success to us that we were able to manage the patient with Inj.Methotraxate 1mg/kg stat followed by Tab.Misoprostol 200mcg BD for 3 days; which stopped vaginal bleeding without any adverse outcome. On follow up ultrasonography after 3 weeks suggested empty uterine cavity and more importantly no AVM.

Conclusion

As in acute emergency differentiate RPOC from Uterine AVM is crucial. As management plans are totally different. Most importantly uterine curettage can create havoc in AVM, which can lead to torrential hemorrhage as vessels of the vascular malformation can extend up to the endometrium [**8,9**]. Thus, the lesson learnt while managing this case , although rare one should keep in mind differential of retained product of conception.Possibility of RPOC mimicking uterine AVM should not neglect in patients presented with severe symptom. Conservative management of AVM is for vitally stable patient while embolization of uterine artery to be considered to avoid hysterectomy with aim to preserve future fertility .(**10**)

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