Case Report

Uterine Arteriovenous Malformation (UAVM) – A Case Report

Tasnim Tahira, Sumera Tahir, Syeda Hina Ali

ABSTRACT

Uterine arteriovenous malformation (UAVM) is a rare condition with less than 100 reported cases. This case report describe a 32 years old, P_2 patient who presented with abnormal uterine bleeding and severe anemia. Gray scale ultrasonography alongwith colour Doppler showed increase vascularity within the myometrium. Pelvic angiography was done to confirm the diagnosis. Patient's anemia was corrected by blood transfusion and uterine artery embolizaiton (UAE) was planned. Meanwhile, she developed a heavy episode of vaginal bleeding and went into shock. Patient opted for hysterectomy as a life saving measure.

Keywords: Uterine arteriovenous malformation (UAVM), abnormal uterine bleeding, pelvic angiography.

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INTRODUCTION

Uterine arteriovenous malformation (UAVM) is a rare condition with less than 100 reported cases[1]. Arteriovenous malformations arise by definition from an abnormal communication between an artery and a vein. Histological examination of these malformations usually reveals a localized proliferation of both arterial and venous vessels with interconnectiong fistulae. Intertwining these muscular vessels there are many thin-walled capillary-type vessels. UAVM may be congenital or acquired. Acquired cases are more common and have been attributed to previous pelvic surgery or curettage, trophoblastic disease and cervical or endometrial malignancy[2]. The classical presentation of UAVM is often severe uterine bleeding with no obvious cause. Transvaginal scan with colour Doppler provides non invasive method of diagnosis[3]. However, pelvic angiography is gold standard for diagnosis[4].

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CASE PRESENTATION

A 32 years old patient presented with history of heavy vaginal bleeding for 6 months. Her previous menstrual cycles were heavy and she used to soak 5 to 6 pads per day. She was unable to perform her daily activities during menstruation. She used to take antifibrinolytic drugs for her problem but there was no significant improvement. Now, for the last 6 months her problem was aggravated to such an extent that she was having almost continuous bleeding with relief of about a few days in between. She also took hormonal treatment from general physician but there was no relief. She was investigated in private sector and was found to be anemic. There was history of 3 units of blood transfused in last 3 months. Her ultrasonography of pelvic was done and no abnormal finding was detected.

She was P_2 having two alive issues. Her last born child was 3 years of age. Her first pregnancy remained uneventful till term. She had LSCS at private hospital due to presumed fetal compromise. There was history of 5-6 units of blood transfused per operatively. Her 2nd pregnancy remained uneventful. She underwent elective repeat LSCS at private hospital and there was massive intra-operative hemorrhage and 9 units of bloods were transfused to her.

Upon examination, she was markedly pale, but stable hemodynamically, abdominal examination was unremarkable. On speculum examination, there was mild bleeding coming out of the cervical os and cervix was normal looking. On bimanual examination, uterus was normal in size. On transabdominal USG, size of the uterus was 8.5 x 5.0 x 4.8 cm. Endometrial thickness was 9 mm. Her Hb% was 5.8 g/dl. Her platelet count and TLC was with in normal range. Her serum βhCG was 1.01 iu/l. Doppler ultrasonography showed intensely vascular and multidirectional flow suggestive of uterine arteriovenous malformation. Her CT angiography was done which confirmed the diagnosis.

Patient was counseled regarding the treatment option of uterine artery embolization (UAE). Meanwhile her anemia was corrected by multiple blood transfusions. While she was under treatment, she developed a further episode of heavy vaginal bleeding which continued and patient went into shock. She was given further blood transfusion and crystalloid fluid. Patient opted for hysterectomy as a life saving measure. Her hysterectomy was done with meticulous hemostasis 1 unit of blood was transfused intra-operatively. Her postoperative period remained uneventful. Her postoperative Hb% was 10.8 gram. She was discharged on 5th postoperative day in a good condition. On follow-up she developed no complaint.

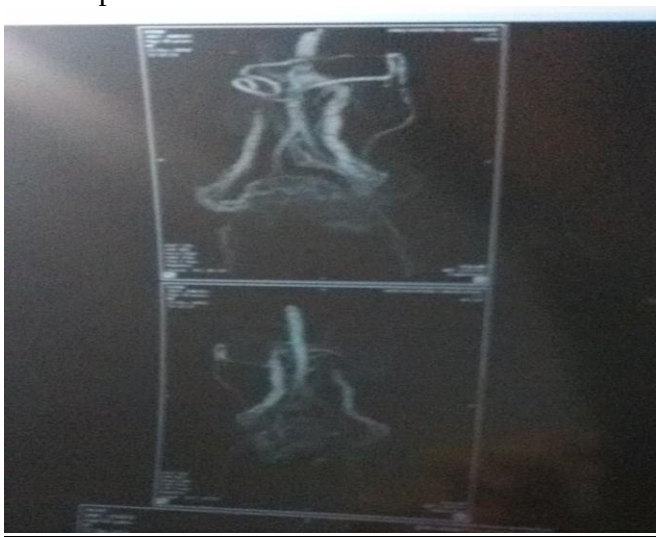

Figure A: Pelvic angiography showing abnormal blood vessels, the feedings vessels are arising from both internal iliac arteries.

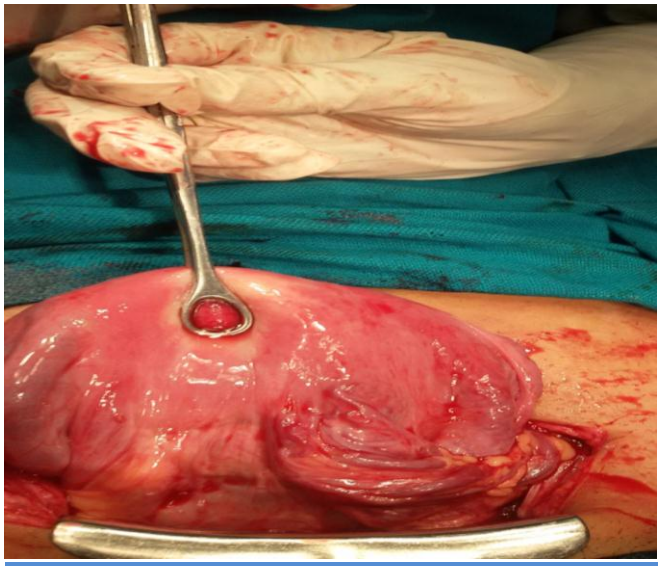

Figure B: Uterus showing highly vascular uterine artery malformation especially on the left side

DISCUSSION

UAVM is though rare but potentially life threatening condition due to profuse virginal bleeding that may cause hemodynamic instability. The first case was reported in 1926 by Dubreul et al as cirsoid aneuryusms[5]. Although, UAVM has been reported in adolescent girls and postmenopausal women, it predominately occur in female of reproductive age group. UAVM is suspected in a woman of reproductive age group if she presents with vaginal bleeding in the absence of complication of pregnancy or organic pathology. Gray scale Ultrasonography alongwith colour Doppler and pelvic angiography are the investigation of choice. Similar case of UAVM was reported by Khadija Ranjha, where patient presented with heavy bleeding which followed after miscarriage and the patient was managed by UAE[6]. Diagnosis of UAVM has proved difficult. The standard diagnostic procedure such as gray-scale ultrasonography has not proved to be adequately robust. The current gold standard method of diagnosis is pelvic angiography. This invasive procedure allows confirmation of the diagnosis, but also helps to identify the leading feeder vessels where embolization may be indicated as a conservative treatment option[7]. However, Timmerman et al presented 10 cases that demonstrated UAVM features by color Doppler USG[8].

CONCLUSION

Patients presenting with irregular vaginal bleeding should be evaluated by transvaginal USG alongwith color Doppler. If findings are suggestive of UAVM, pelvic angiography should be done to confirm the diagnosis. So that conservative management of UAVM can be done by uterine artery embolization and morbidity of severe anemia and hysterectomy can be avoided.

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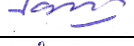
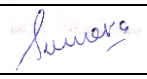
Dr. Tasnim Tahira	1st Author	
Prof. Dr. Sumera Tahir	2nd Author	
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