HYSTEROSCOPY VISUALISATION OF ARTERIOVENOUS MALFORMATION OF UTERUS AND ITS MEDICAL MANAGEMENT

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ABSTRACT: We present a patient who has prior delivery by Caesarean section having arteriovenous malformation in the uterus. The diagnosis of an AVM was made by color Doppler velocimetry and confirmed with hysteroscopy. The patient desired to maintain her fertility and was managed conservatively with GnRH analogues.

KEYWORDS: Arteriovenous malformation, Color Doppler velocimetry Hysteroscopy, GnRH analogues.

INTRODUCTION: A rare uterine abnormality, i.e., arteriovenous malformation (AVM) of the uterus is related to the molar disease, choriocarcinoma, and uterine surgery and sometimes it is congenital. An unexplained abundant uterine bleeding occurred due to presence of AVM. Usually, the diagnosis of AVM has been made by arteriography and the standard treatment for AVM is hysterectomy.[1]

We present a patient who has prior delivery by Caesarean section having AVM in the uterus. The diagnosis of an AVM was made by color Doppler velocimetry and confirmed with hysteroscopy. The patient desired to maintain her fertility and was managed conservatively with GnRH analogues.

CASE REPORT: Mrs. A, a 20 year old woman got admitted in Dr. B. R. Ambedkar college hospital with complaint of excessive bleeding from vagina since two months. Patient had undergone emergency cesarean delivery in a government institution for primigravida with 36 weeks gestation with IUGR with PROM with oligohydramnios. No history suggestive of any significant post-operative complications. On day 24 after post-surgery, she had sudden excessive vaginal bleeding for a day. Bleeding was associated with severe abdominal pain and passing of clots. Then, she was transferred to a private hospital where she receives two units of blood. Bleeding stopped and she was discharged within 24 hours of admission. After four days, patient had one more episode of excessive vaginal bleeding which was managed conservatively in another hospital. She had a total of four episodes of heavy vaginal bleeding. Finally, she went to a tertiary hospital where she receives 3 units of blood, underwent serum beta- HCG estimation and uterine curettage.

Serum beta - HCG values and histopathology report of curette sample is not available. Since, episodic bleeding from vagina recurred again and patient transferred to our hospital. Then, after case discussion patients had undergone for hysterectomy.

Past menstrual history of patient was normal with insignificant dysmenorrhoea. Obstetric history of patient is P1 L1, LCB 2 months back. No significant past, personal, family history. Antenatal checkups were done at a private clinic by a registered medical practitioner and was uneventful. Patient is moderately built and poorly nourished. Patient had appeared severely pale and weighs 40 kg with a BMI 17.7 kg/m^2. Cardiovascular and respiratory systems appeared normal. Abdomen was soft, with tenderness over the suprapubic and left iliac region. A pfannenstiel incision for a caesarian section was seen. On per speculum, cervix and vagina appeared normal with minimal bleeding through external OS. Bimanual examination revealed anteverted bulky non-tender uterus. Fornices were free and non-tender. Blood Investigations showed Haemoglobin 7.4 gm%, total and differential Count WNL, Bleeding Time 2'30", Clotting Time 5', Prothrombin time 17.7 seconds, Platelet Count 2.1 lakhs\cu mm. Ultrasound pelvis should no gross abnormality. Doppler study of uterus showed tortuous dilated arteries in the anterior wall of lower body and left lateral wall indicating vascular malformation. During hospital stay patient received 2 units of packed cells and was on antifibrinolytics.

Diagnostic hysteroscopy showed flimsy COBWEB like adhesions occupying entire uterine cavity with multiple big and medium size blood vessels traversing along them (Figure 1a & 1b). Cauterising the bases of the vessels is very difficult because it was not possible to visualize the bases of vessels due to cotton wool adhesions all around. Lueprolide injection 3.75 mg was given subcutaneously to stop the bleeding apparently. No fresh episodes of vaginal bleeding or abdominal pain. Patient was asymptomatic and was discharged on day 16 after surgery. After a regular follow up of 6 months, patient was having regular menstrual cycles with moderate flow.

DISCUSSION: Uterine AVMs are rare lesions which possess a potential risk. The clinical presentation of uterine AVM is highly variable i.e. no signs to various degrees of menorrhagia and even may have immense life threatening vaginal bleeding. Thus, clinical suspicion is required for uterine AVM to diagnose quickly and treat rapidly.[2]

AVM presented with arterial and venous proliferation along with fistula formation. It also presented with admixture of small, capillary like channels. Usually, clinicians face lot of challenges in distinguishing between artery and vein because there is an increased intra luminal pressure which causes secondary intimal thickening.[2]

Obstetric causes include previous uterine surgery, curettage, caesarean delivery and gestational trophoblastic diseases. Other causes include exposure to diethyl stilbesterol, pelvic trauma, endometriosis, fibromyoma, intra uterine devices, endometrial or cervical cancers.[2]

Ultrasonography, contrast enhanced computed tomography, magnetic resonance imaging and angiography are used for diagnosis of uterine AVMs.

Due to multiple anechoic spaces within the myometrium at the uterine, ultrasound demonstrates mixed echogenicities. Color Doppler ultrasonography is consistent for the diagnosis of uterine AVM due to high velocity flow with a low resistive index.[3]

The factors for management of uterine AVM are patient's hemodynamic status, age, desire for future fertility and severity of bleeding. After medical treatment advances, hysterectomy was not the only treatment, uterine artery embolization and GnRH agonists are also included for the management of uterine AVMs. Uterine artery embolization with GnRH agonists

treatments are safe, effective and affordable method of treatment when uterine function is to be preserved.[4]

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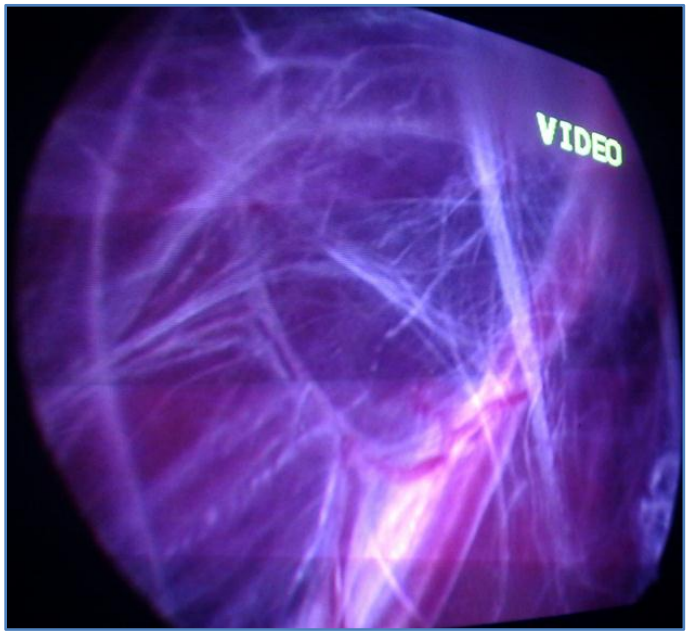

Fig. 1(a): Flimsy COBWEB LIKE adhesions bands occupying entire uterine cavity with multiple big and medium size blood vessels

Fig. 1(b): Flimsy COBWEB LIKE adhesions bands occupying entire uterine cavity with multiple big and medium size blood vessels

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