



## Placental polyp with suspected AVM treated with methotrexate followed by selective embolization and removal - A Case Report

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### ABSTRACT

A 28year old women (primigravida) underwent medical termination of pregnancy (MTP) at 21 weeks of gestation for fetal esophageal atresia. After 2weeks of MTP she experienced severe abdominal discomfort and came with USG showing retained products of conception and vascular mass in the uterine cavity. She was given injection Methotrexate intramuscularly in view of high vascularity of the mass with a plan for evacuation after reducing vascularity. On USG there was persistent vascularity and hence proceeded with MRI pelvis with MR angiogram. The presence of a placental polyp with arteriovenous malformation was suspected on MRI pelvis. The patient underwent a transfemoral angiogram and selective embolization of both uterine arteries followed by hysteroscopic evacuation of retained products of conception (RPOC).

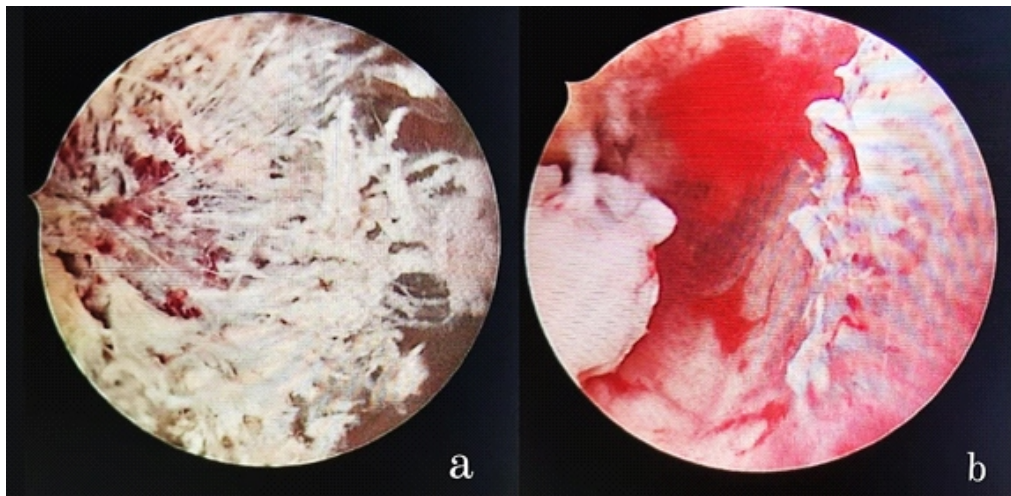
### INTRODUCTION

Placental polyp is a fragment of placental tissue that remains in the uterine cavity following parturition or the termination of a pregnancy. They are observed in fewer than 0.25 percent of pregnancies. Only 6% of placental polyps are hyper vascular and associated with severe haemorrhage<sup>[1]</sup>. If they are presented with severe vaginal bleeding these can be life-threatening<sup>[2]</sup> Enhanced myometrial vascularity (EMV) is an abnormal anastomosis between an artery and vein that bypass the capillary bed. EMV is often misdiagnosed as an acquired uterine arteriovenous malformation (AVM), where transiently increased blood flow is seen within the uterine myometrium.

EMV is almost exclusively seen in the context of recent pregnancy and therefore occur in women of reproductive age. It is typically secondary to retained products of conception in early postpartum period or following first trimester miscarriage or termination of pregnancy<sup>[3]</sup>. Hyper vascular placental polypoid mass is a possible source of acute haemorrhage after pregnancy<sup>[4]</sup>. Management of patient with EVM depend on the extent of their symptoms. If significant bleeding is present surgical management is required. In patient with preoperative bleeding and or with anaemia, uterine artery embolization (UAE) should be considered. Each patients require management based on their signs and symptoms<sup>[5]</sup>.

### CASE REPORT

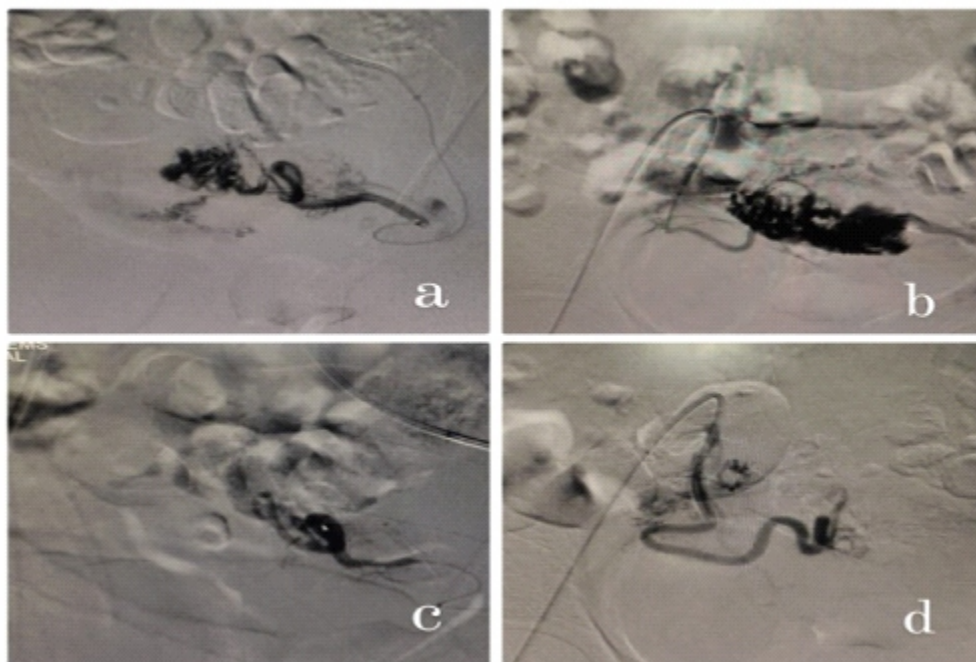
A 28year old women (primigravida) underwent MTP at



**Fig. 1:** a) Hysteroscopic image showing retained products of conception with vascularity. b) Post evacuation

21 weeks of gestation for fetal esophageal atresia. She had history of hypothyroidism for which treatment was taken 6 months back. During postabortal period she was anaemic hence 1 pint PRBC transfusion was given and Misoprostol 200mcg two times daily for 2 days was also given. After 2 weeks of MTP, she experienced severe abdominal discomfort and came with USG showing retained products of conception 1.6x1.3cm with ET of 10.5mm and a vascular mass in the cervical canal. (Fig.1) Methotrexate dosed at 50mg was given intramuscularly as injection in view of high vascularity. Later USG was done showed persistent vascularity and bulky uterus with homogenous hyperechoic area of 4x3.2x2.7 with dilated vascular channels extending to the anterior wall. Hence proceeded with MRI pelvis

with MR angiogram. This report showed a small polypoid lesion measuring 10x7mm noted projecting into the endometrial cavity in the upper uterine body. A small pedicle like structure appears to be attached to the anterior wall likely endometrial polyp. The diagnosis was placental polyp with suspected AVM. After discussing with the patient, it was decided to wait for spontaneous resolutions. After 2 weeks USG was done which showed similar findings. On (09/11/2022) she underwent transfemoral angiogram which showed increased myometrial vascularity and selective embolization followed by hysteroscopy guided evacuation of RPOC (Fig.2). She was given general anaesthetics prior to the procedure. A mass of 2x4cm noted in the anterior myometrium just above the internal OS with chronic villous



**Fig. 2:** Hysteroscopic images showing a) Left uterine artery pre embolization. b) Right uterine artery pre embolization. c) Right uterine artery post embolization. d) Left uterine artery post embolization.

pattern. Rest of the cavity was normal. Pulse, respiratory rate and BP were within normal limits. Post operatively managed with LMWH and antibiotics. Aspirin dosed at 75mg once daily was given for 10 days. She was discharged in stable condition. Repeated scan after 2weeks, demonstrated uterus with normal endometrium with myometrial vascularity significantly reduced compared to earlier.

## DISCUSSION

In the present case placental polyp with suspected AVM was successfully treated by uterine artery embolization and removal. EMV is often misdiagnosed as an acquired uterine arteriovenous malformation (AVM)<sup>5</sup>. Enhanced myometrial vascularity is readily visualised on transvaginal colour Doppler ultrasound, as well as CT or MR angiography. However true uterine arteriovenous malformations appear identical on these modalities and can only be distinguished from enhanced myometrial vascularity on digital subtraction angiography, which is considered the gold standard. In our case also we first suspected it as AVM, with differential diagnosis placental polyp with enhanced myometrial vascularity. Placental polyps contain more abundant blood supply. In many of the previous cases Methotrexate was given to reduce the vascularity. Similarly in our patient also we administered Methotrexate. But in our case the vascularity persisted even after weeks of the administration of Methotrexate. The chosen treatments depends on whether the bleeding is continuous and the blood flow velocity is high with in the polyp.

In order to preserve fertility many procedures like conservative vaginal resection, selective trans arterial embolization before hysteroscopic removal can be done. Hence treatment with UAE can preserve uterus. A retrospective cohort study by Sumire Sorano et al<sup>[6]</sup>. came to a conclusion that adding UAE might be safer to treat placental polyps that have strong vascularity. In our case the patient underwent transfemoral angiography which showed increased myometrial vascularity and proceeded with selective embolization of both the uterine arteries followed by hysteroscopy guided evacuation of RPOC. However, enhanced myometrial vascularity and uterine arteriovenous malformations have similar clinical characteristics, it is important that through proper investigations the clinicians should accurately identify and differentiate them to ensure optimal therapy.

## CONCLUSION

Placental polyp with enhanced myometrial vascularity is a rare but can lead to many life threatening cause of menorrhagia. The signs and symptoms differ from patient to patient. The most common and serious condition should be explored. Due to low incidence and tendency for spontaneous resorption, early recognition, of enhanced myometrial vascularity it still represents a medical challenge. The optimal investigation and well planned management are needed to alleviate morbidity and preserve fertility if desired. Hysteroscopy, MRI, Transfemoral angiogram remained as a good tool to reach definitive diagnosis

and treatment in our case.

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## CONFLICT OF INTEREST

The author declares no conflict of interest.

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