

A Case Report of Uterine Artery Aneurysm

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ABSTRACT

Secondary PPH is defined as abnormal or excessive bleeding from the birth canal between 24 hours and 12 weeks postnatally. Uterine artery pseudo-aneurysm (UAP) is one of the rare causes of the secondary PPH, a prevalence of 2-3/1000 deliveries has been cited when asymptomatic patients are included. We are reporting here a case of 40 years old middle eastern female who presented with secondary PPH after emergency lower segment cesarean section (LSCS). On her third visit she was investigated and diagnosed as UAP for which her Uterine artery embolization (UAE) was done and the fertility of the patient was preserved.

Key Words: Uterine artery embolization, hemorrhage, uterine artery pseudoaneurysm

INTRODUCTION

Primary postpartum hemorrhage (PPH) is the most common form of the major obstetric hemorrhage which is occurring within 24 hours of the delivery.⁽¹⁾

Secondary PPH is defined as abnormal or excessive bleeding from the birth canal between 24 hours up to 6 weeks after delivery.⁽²⁾ However, Alexander et al defined secondary PPH till 12 weeks postnatally.⁽³⁾ In the developed world 2% of the patients are presenting with secondary PPH and out of them 50% are going for the surgical evacuation.⁽³⁾ Uterine artery pseudo-aneurysm (UAP) is one of the rare causes of the secondary PPH, a prevalence of 2-3/1000 deliveries has been cited when asymptomatic patients are included.⁽⁴⁾ A pseudoaneurysm is an extra luminal collection of the blood which is contained by the adventitia or surrounding perivascular soft tissue.⁽⁵⁾ It communicates with the flowing arterial blood through a defect in the arterial wall, it causes recurrent hemorrhage when it connects with the uterine artery.⁽⁶⁾ Pseudoaneurysm of the

uterine artery or its branches is usually a result of vascular trauma during vaginal delivery, cesarean section, myomectomy, hysterotomy and dilatation and curettage.⁽⁷⁾ The absence of the three layers of the arterial wall lining in the pseudoaneurysm differentiates it from a true aneurysm.⁽⁸⁾

CASE REPORT

40 years old middle eastern woman who was gravida 6 para 5 and had previous 5 normal deliveries, was admitted at 37 weeks with IUGR and Oligohydramnios, for induction of labor with prostaglandins. She started having regular contractions after 8 hours of the initiation of induction. Her labor progressed smoothly till 3.0 cm and then she started having category 2 CTG. Resuscitative measures were done but the CTG progressed to category 3 within next 30 minutes and her category 1 lower segment caesarean section (LSCS) was done. She didn't experience any intra operative and immediate postoperative complications and was discharged in stable condition on day 4 of the LSCS. She was

seen in outpatient department (OPD) on 9th post-operative day (POD). Her wound was healing normally and she was having normal bleeding.

On her 11th POD she presented in the emergency room with complaint of vaginal bleeding with passage of clots at home. Her vitals on examination were stable and she was having very mild vaginal bleeding on examination. Estimated amount of the blood loss (EBL) was 200cc. Her uterus was bulky and the os was closed on examination. Her ultrasonography (USG) was done and the possibility of retained products of conception was ruled out. She was discharged on oral antibiotics and the tranexamic acid.

She presented again in ER on 21st POD with history of vaginal bleeding. This time the bleeding was moderate. EBL was 400 cc. Her pfannenstiell scar was nicely healed. The uterus was bulky and the cervical os was closed. She was advised admission which she refused and was discharged against the medical advice.

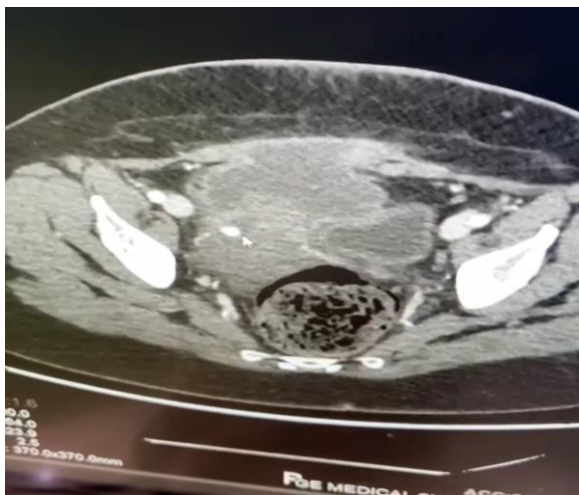


Figure 1: CT image with contrast. Transverse view.

After 2 days of her last visit in the ER she presented again with moderate vaginal bleeding. On examination patient was stable except mild tachycardia the uterus was bulky was closed os and active bleeding was noticed this time. Her Hemoglobin (HB) dropped to 7.0 gm%. She was admitted and broad-spectrum antibiotics were given. Her USG was repeated and nothing significant was found.

Unfortunately, the aneurysm was missed on doppler USG. Her computed tomography (CT) was done and right sided uterine artery aneurysm was identified, as shown in figure 1 and 2.

The arrow is showing the aneurysm in relation to the right uterine artery.

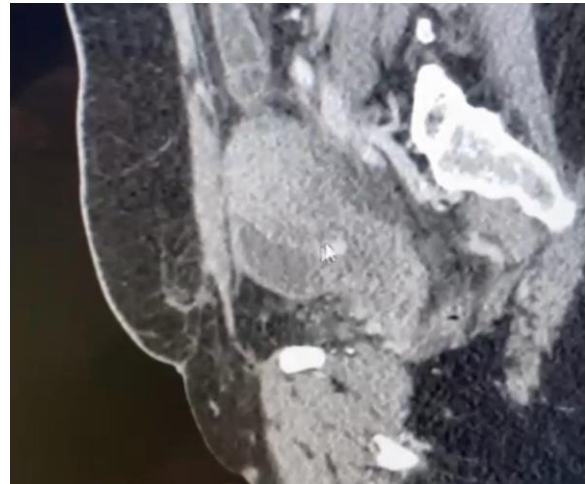


Figure 2: CT image with contrast. Longitudinal view. The arrow is showing the aneurysm in relation to the right uterine artery.

The patient was resuscitated and two units of pack cells were given. She was referred to the interventional radiologist who proceeded for the uterine artery embolization (UAE).

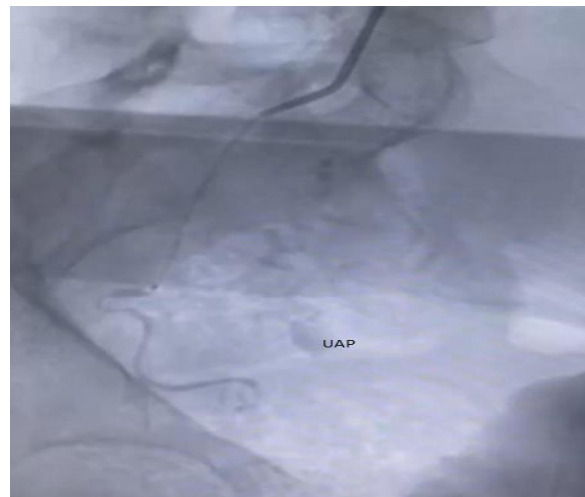


Figure 3: Angiogram showing the uterine artery pseudo aneurysm (UAP)

The patient remained stable after the procedure and her post op recovery was uneventful. She received another unit of blood after the UAE.

Her post op recovery was uneventful and she was discharged in stable condition.

She was followed for three months and is having regular periods after that. Her last HB was 12.6 gm%.

DISCUSSION

Secondary PPH is the excessive bleeding after 24 hours of the delivery. The etiology of the secondary PPH includes retained products of conception, endometritis, placental bed subinvolution, pseudoaneurysm of the uterine artery, arteriovenous malformations and choriocarcinoma. ⁽⁹⁾ Precise diagnosis of the vascular causes of the secondary PPH helps to avoid unnecessary curettage and may avoid life threatening hemorrhage.

With the introduction of the latest imaging techniques the diagnosis of the uterine vascular abnormalities has become effort less. ⁽¹⁰⁾

The patient under discussion presented with the secondary PPH. However, the diagnosis was made by CT and was confirmed on angiography.

USG, and CT imaging are being routinely used as initial diagnostic procedure, however angiography remains the gold standard modality in diagnosing vascular abnormalities. ⁽¹¹⁾ UAP can occur due to dilatation and curettage, myomectomy, after an uncomplicated vaginal delivery, hysterectomy and caesarean section. ⁽¹²⁾

Yenieli et al in 2013 ⁽⁹⁾ reported a 28 years old female who developed PPH after LSCS like the patient mentioned in this case report. The aneurysmatic vessel was resected and the right uterine artery was ligated to preserve the fertility, in contrast to the UAE which was done for the patient under study.

In another case report, Zimon et al ⁽¹³⁾ described a 31 years old female who presented on day 8 after LSCS with suprapubic pain. UAP was diagnosed with USG and later confirmed by angiography. UAE of the left uterine artery was done in that patient, similar to the patient under discussion.

In 2011, Dossari et al ⁽¹⁴⁾ reported a UAP in a 30 years old female who came with PPH and the abdominal pain after 3 weeks of LSCS. Left UAP was diagnosed. This patient was offered a bilateral internal iliac artery ligation since UAE facility was not available.

In this case UAE was done successfully and the fertility of the patient was preserved. There have been other case reports as well in which UAE was done and the patient was saved from the life-threatening hemorrhage. ⁽¹⁵⁾

CONCLUSION

For any patient presenting with the secondary PPH, uterine artery aneurysm should be kept in the differential diagnosis, to save the patient from the life-threatening hemorrhage and preserving her fertility by offering UAE.

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