



Iatrogenic uterine vascular lesion: A rare cause of secondary postpartum hemorrhage– case report

Dear Editor,

We report a case of life-threatening secondary postpartum hemorrhage (PPH) caused by previously misdiagnosed iatrogenic uterine vascular lesion.

A 26-year-old G2P1 woman presented with secondary PPH following Caesarean Section. The first episode of vaginal bleeding commenced 10 days post-surgery. She came to a local hospital, was admitted for a few days, observed, then discharged after the bleeding stopped spontaneously. Six days later, she experienced another vaginal bleeding, came to the same local hospital, was yet again observed, and discharged after her bleeding stopped. Within 2 weeks, severe bleeding recurred. She was given four units of packed red cells and a curettage was carried out for her. Ten days later, she experienced severe bleeding and received 2 units of packed red cells. As her bleeding showed no sign of abating, she was referred to our hospital. This was 41 days after her Caesarean section. On physical examination, her pulse rate increased (114x/minute), while other vital signs were normal. Her uterus was involuted normally. On speculum examination, bleeding was noted through the cervix. Her Hb was 12.2 gr/dL, Hct 37%, leukocyte 7010/mm³, and platelet 396000/mm³. She was given 20 IU oxytocin diluted in 500 mL Ringer Lactate solution and methergine injection to stop the bleeding. Ultrasonography examination showed a hypoechoic area in the lower uterine segment. No residual placental tissue was found. Color Doppler demonstrated characteristic yin-yang pattern, which was a swirl of colors representing the opening of pseudoaneurysm and its supplying artery (Fig. 1). These findings led to the suspicion of uterine artery pseudoaneurysm.

We initially planned to perform pelvic angiography for diagnosis confirmation, followed by uterine artery embolization as her definitive treatment. However, massive bleeding suddenly occurred (possibly due to pseudoaneurysm rupture) and the patient went into a state of pre-shock that necessitated emergency laparotomy to stop the bleeding by

hysterectomy. Intraoperative findings demonstrated normal uterus. After removal of uterus by hysterectomy, the specimen was incised outside the operating field. We found retained blood clot at the presumed location of uterine vascular lesion on the right side of the uterus. Final histopathological examination confirmed the diagnosis of right uterine artery pseudoaneurysm. The patient was discharged in a satisfactory condition 3 days following her surgery.

Postpartum hemorrhage is the leading cause of maternal death worldwide. Secondary PPH is defined as any abnormal bleeding from birth canal occurring between 24 hours to 12 weeks postpartum. [1] Uterine vascular lesion which consists of: pseudoaneurysms, acquired arteriovenous malformation, arteriovenous fistula, and vessel ruptures; is a rare cause of secondary PPH. Surgical procedures such as cesarean section, curettage, myomectomy, and hysterectomy may cause these vascular abnormalities. [2,3] Diagnosis confirmation of uterine vascular lesions can be made either by angiography or postoperatively by histopathological examination of gross hysterectomy specimen. However, angiography is still considered the gold standard of diagnosis. Transcatheter arterial embolization is the main choice of treatment for uterine vascular lesions. Surgical management should be considered in cases of acute and life-threatening bleeding. [4].

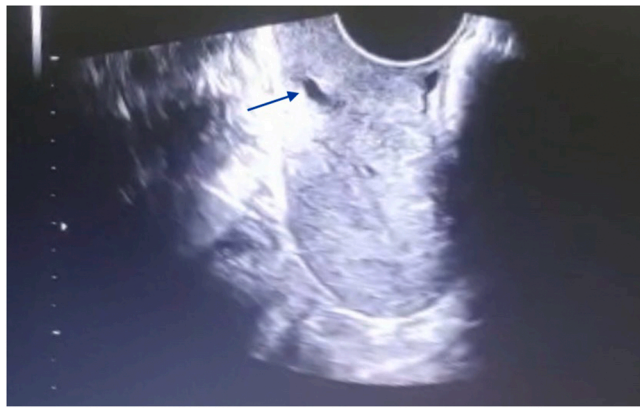
Although rare, early recognition of uterine vascular lesion as the cause of PPH is crucial. Mismanagement with curettage that is intended for more common cause of PPH, i.e. placental retention, may in turn aggravate uterine bleeding and worsen patient's condition. Grayscale and color doppler ultrasonography should be considered in routine evaluation of PPH to screen for vascular lesions, especially in PPH cases with unclear etiology. [5] In the end, adequate resuscitation, prompt diagnosis using proper imaging, and avoidance of inappropriate interventional procedures are the essential points for effective uterine vascular lesion management. We try to emphasize these through our

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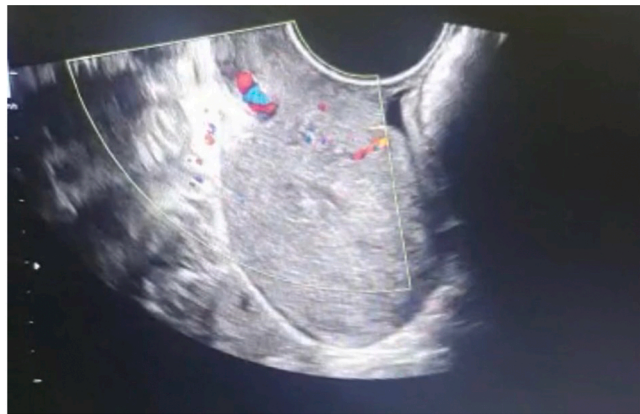
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Fig. 1. Transvaginal ultrasonography results showing uterine artery pseudoaneurysm following CS in a 25-year-old woman. (A) Longitudinal grayscale ultrasonography image showing hypoechoic area in the lower uterine segment (arrow). (B) Color doppler ultrasonography image demonstrating blood filled sac that forms the characteristic yin-yang pattern.

case, to avoid late diagnosis and mismanagement of uterine vascular lesion.

Ethical approval

This study does not require ethical approval as determined by the

institutional and departmental review board.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgment

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