

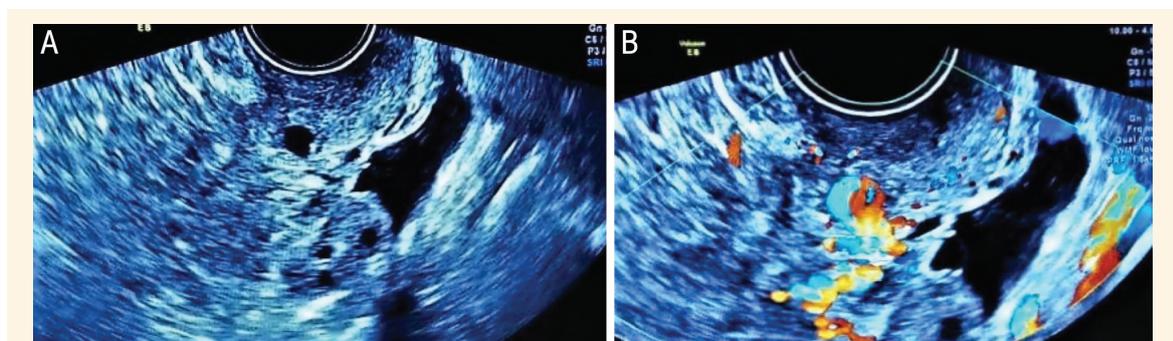
# Uterine Pseudoaneurysm

## A rare cause of delayed postpartum haemorrhage managed with uterine artery embolisation

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### أم دم كاذبة رحمية سبب نادر لتزيف نفاس آجل مع انصمام الشريان الرحمي

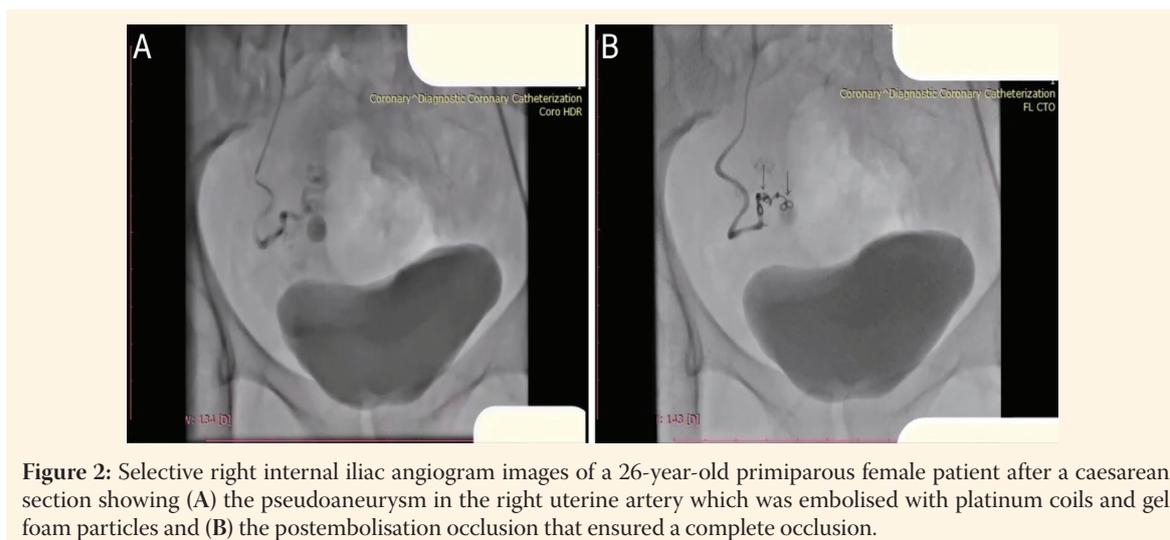
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**Figure 1:** A: Greyscale two-dimensional ultrasound of a 26-year-old primiparous female patient after a caesarean section showing a normal-sized uterus with heterogeneous myometrial echotexture and thin endometrium lining. B: Colour Doppler sonography showed intense myometrial hypervascularisation with turbulent flow in the hypoechoic region, near the uterine incision site on the right side, involving the right uterine artery.

**A** 26-YEAR-OLD PRIMIPAROUS FEMALE PATIENT underwent caesarean section for persistent occipito-posterior position in 2018 at the Department of Obstetrics and Gynecology, Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry, India. Upon postnatal follow-up six weeks later, both mother and baby were reported to be fine. At eight weeks postpartum she had an episode of heavy vaginal bleeding which was treated symptomatically with tranexamic acid and antibiotics at a local hospital. One month after this, she had another episode of heavy vaginal bleeding at home and was referred to the emergency department at Jawaharlal Institute of Postgraduate Medical Education & Research. On examination, she was pale, had a pulse rate of 90 per minute and blood pressure of 120/70mm Hg. She had a transverse abdominal scar that had healed by primary intention and the uterus was involuted normally. On speculum examination, minimal bleeding was only noted through the cervix. Intravenous antibiotics was

started with a suspicion of infective aetiology for haemorrhage. An ultrasound showed a normal-sized uterus with heterogeneous myometrial echotexture, due to the presence of multiple anechoic areas, and thin endometrial lining with no retained products of conception [Figure 1A]. Colour Doppler sonography showed intense myometrial hypervascularisation with turbulent flow in the hypoechoic region suggestive of a pseudoaneurysm, near the uterine incision site on the right side involving the right uterine artery [Figure 1B]. Her haemoglobin at admission was 8.2 g/dL. She underwent bilateral uterine artery embolisation under fluoroscopic guidance which confirmed pseudoaneurysm in the right uterine artery. The pseudoaneurysm was embolised with platinum coils and gel foam particles; postembolisation images ensured a complete occlusion [Figure 2]. The patient did not have any further bleeding and was discharged five days later. She resumed normal menstruation two months following the procedure.



**Figure 2:** Selective right internal iliac angiogram images of a 26-year-old primiparous female patient after a caesarean section showing (A) the pseudoaneurysm in the right uterine artery which was embolised with platinum coils and gel foam particles and (B) the postembolisation occlusion that ensured a complete occlusion.

## Comment

Uterine pseudoaneurysm is a rare, life-threatening complication after caesarean section. It can present diagnostic difficulties, as it is rare and has varying presentations. It forms after central liquefaction of a haematoma, which forms from a vascular injury during caesarean section. This leads to the formation of a cavity, without a normal arterial three-layered lining, with turbulent flow through a persistent communication between the parent artery and haematoma. This poses a challenge to the treating team, as it may present with unpredictable profuse bleeding which might occur repeatedly at variable time intervals, ranging from weeks to months after its development.<sup>1</sup>

Using a greyscale ultrasound or a colour Doppler can aid in diagnosis with high sensitivity, even though angiography remains the standard for diagnosis and may aid in definitive treatment.<sup>2</sup> Greyscale ultrasound imaging can identify a pseudoaneurysm as a hypochoic area, which on colour Doppler, shows a to-and-fro turbulent flow resulting from the blood flow into the pseudoaneurysm during systole and backward flow during diastole.<sup>2</sup>

Uterine artery embolisation is usually the preferred treatment, as it is a safe and effective method in managing such cases.<sup>1,2</sup> Selective catheterisation of the uterine artery with a coaxial technique using particulate materials, can lead to persistent occlusion of arterial cross-over anastomoses, as was seen in the current case. Uterine pseudoaneurysm should be remembered as an important differential diagnosis in women who had undergone caesarean section and later presented with acute, causeless, painless and often recurrent bleeding.

## References

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