Acta Scientific Clinical Case Reports (ISSN - 2584-1289)

Volume 7 Issue 1 January 2026

Case Report

Uterine Artery Pseudoaneurysm: A Rare but Serious Post-Cesarean Complication

Héla Gargouri*, Fatma Khanfir, Hayfa Ghaoui and Kais Chaabane

Obstetrics and Gynecology Department of Sfax, Hédi Chaker University Hospital, Tunisia

***Corresponding Author:** Héla Gargouri, Obstetrics and Gynecology Department of Sfax, Hédi Chaker University Hospital, Tunisia.

Received: January 19, 2026

Published: March 26, 2026

DOI: 10.31080/ASMS.2026.07.0685

Abstract

Uterine pseudoaneurysm is a rare but potentially serious complication of cesarean section, which can lead to severe postpartum hemorrhage, with an estimated prevalence of 2–3 cases per 1,000 deliveries.

We report the case of a patient admitted to the gynecological emergency department for heavy metrorrhagia, revealing a uterine pseudoaneurysm diagnosed late after a cesarean section. The clinical course occurred in a context of hemorrhagic shock.

Emergency selective arterial embolization was performed, allowing rapid hemodynamic stabilization and complete recovery of the patient. This selective arterial embolization enabled definitive exclusion of the lesion while preserving the patient's fertility.

Keywords: Uterine Pseudoaneurysm; Fertility

Introduction

Uterine pseudoaneurysm is a rare complication with a prevalence of 2 to 3 per 1,000 deliveries [1], but it is potentially fatal following cesarean section [2] and is often responsible for severe postpartum hemorrhage. It generally results from vascular injury during surgery, leading to partial rupture of the arterial wall and the formation of a blood-filled cavity communicating with the arterial lumen.

Diagnosis is based on clinical signs such as persistent or delayed metrorrhagia after cesarean delivery. Pelvic ultrasound with Doppler can suggest the lesion, while uterine artery angiography remains the reference examination, both diagnostically and therapeutically. To our knowledge, very few isolated cases have been reported in the literature [3,4].

Case Report

We report the case of a patient who presented to the Gynecology Emergency Department in Sfax in April 2025 for heavy metrorrhagia related to a uterine pseudoaneurysm diagnosed late after cesarean section in a context of hemorrhagic shock.

This was a 38-year-old patient with a history of three term deliveries by cesarean section. Her last cesarean section had been performed 11 months earlier.

She presented to the emergency department with profuse metrorrhagia occurring for the first time 11 months after the last cesarean section, during which a laceration of the uterine pedicle at the left angle of the hysterotomy had been sutured.

Upon admission, the patient developed hypovolemic shock with blood pressure of 8 mm Hg and hemoglobin level of 5 g/dL, requiring transfer to the obstetric intensive care unit for further management.

She received appropriate treatment including transfusion of 4 units of packed red blood cells, 6 units of fresh frozen plasma, 2 g of fibrinogen, and tranexamic acid to treat consumptive coagulopathy.

Emergency ultrasound revealed a pulsatile mass on the anterior uterine wall with turbulent blood flow and a characteristic intracavitary thrombus, suggesting pseudoaneurysm. Doppler examination demonstrated abnormal blood flow in the affected region, confirming the diagnosis.

Additionally, an emergency CT angiography revealed a ruptured pseudoaneurysm of the left uterine artery. Selective arterial embolization was performed urgently, resulting in rapid hemodynamic stabilization and complete recovery.

This selective embolization achieved definitive exclusion of the lesion while preserving the patient's fertility. No recurrence was observed during postoperative follow-up.

Discussion

Uterine artery pseudoaneurysm is a rare but potentially serious vascular complication, most often observed in an iatrogenic or obstetric context. It results from a breach in the arterial wall with formation of a pulsatile hematoma contained by peri-arterial tissues, unlike a true aneurysm, which involves all three layers of the vascular wall.

The pathophysiology is based on arterial trauma associated with postpartum uterine hypervascularization, promoting persistence of an arterio-hematic communication.

Symptoms are dominated by secondary metrorrhagia [5], often delayed (days to weeks after the causal event), recurrent, sometimes massive, and unpredictable [6]. Pelvic ultrasound may diagnose uterine artery aneurysm, revealing a hypoechoic mass [7].

CT angiography [7] or MRI may help confirm the diagnosis and define vascular anatomy. Arteriography remains the reference examination, enabling both diagnosis and treatment.

The current treatment of choice is selective uterine artery embolization [8], which has a high success rate (>90%), low morbidity, and preservation of fertility in most cases.

Surgery (arterial ligation or hysterectomy) is reserved for cases of embolization failure, lack of access to interventional radiology, or major hemodynamic instability [9].

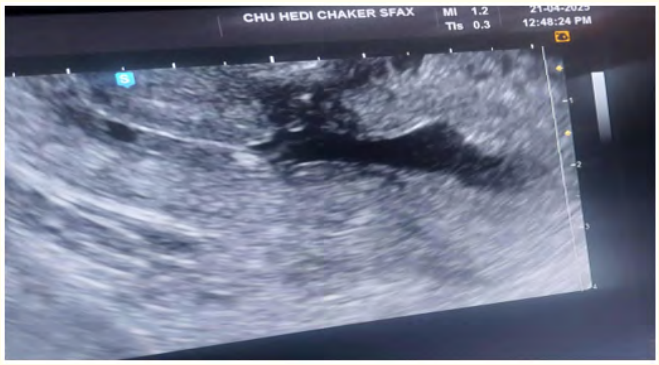

Figure 1: Ultrasound appearance of uterine artery pseudoaneurysm.

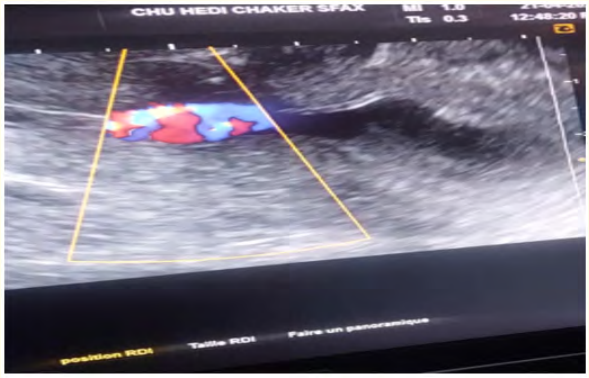

Figure 2: Turbulent appearance of pseudoaneurysm on color Doppler.

Conclusion

Uterine artery pseudoaneurysm is a rare but potentially fatal cause of secondary postpartum hemorrhage after cesarean section. Ultrasound with Doppler is a valuable tool for early diagnosis, and selective arterial embolization remains the treatment of choice.

Early diagnosis and rapid management are essential to improve prognosis.

Bibliography

1. Najam S and Hussain RQ. "A Case Report of Uterine Artery Aneurysm". *International Journal of Medical Research and Health Sciences* 12.4 (2022): 321-324.

2. Borghese O., *et al*. "True Aneurysm of Ovarian and Uterine Arteries: A Comprehensive Review". *Annals of Vascular Surgery* 72 (2021): 610-616.

3. Usman R., *et al*. "True Aneurysm of the Uterine Artery in a Young Nulliparous Female: An Extremely Rare Vascular Entity". *Annals of Vascular Disease* (2018).

4. Nicolaou M., *et al*. "Spontaneous rupture of a true uterine artery aneurysm: a cause of retroperitoneal haematoma". *British Journal of Radiology* 77.914 (2014): 157-158.

5. Benslima N., *et al*. "Uterine artery pseudoaneurysm: an atypical cause of metrorrhagia". *Image Femme* 27.1 (2017): 49-53.

6. Yeniel AO., *et al*. "Massive secondary postpartum hemorrhage with uterine artery pseudoaneurysm after cesarean section". *Case Reports in Obstetrics and Gynecology* 2013 (2013): 285846.

7. Usman R., *et al*. "True Aneurysm of the Uterine Artery in a Young Nulliparous Female: An Extremely Rare Vascular Entity". *Annals of Vascular Disease* 11.4 (2018): 542-544.

8. Crouzat A and Gauci PA. "Treatment of uterine artery (pseudo) aneurysm during pregnancy: A case report and review of the literature". *European Journal of Obstetrics and Gynecology and Reproductive Biology* 299 (2024): 240-247.

9. Hailay G., *et al*. "A Rare Case of Uterine Artery Pseudoaneurysm Causing Secondary Postpartum Hemorrhage Following Cesarean Section". *Clinical Case Report* 14.1 (2026): e71790.