

# Case Presentation: Ruptured Uterine Artery due to Pelvic Abscess following Caesarean Section

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## INTRODUCTION

Postpartum pelvic abscess (PPA) is a rare complication following delivery, occurring after 1% of births[1]. There have been numerous case reports on postpartum abscess formation with various management options including antibiotic therapy, surgical excision, or drainage of the abscess (surgical/ radiological).

However, there is no recorded case of associated erosion of the uterine artery.

We present an interesting case involving ruptured uterine artery secondary to PPA erosion after elective caesarean section, leading to massive intra-abdominal haemorrhage.

## CASE PRESENTATION

A 38-year-old G3P2 had an elective caesarean section (CS) at 39 weeks gestation due to a past history of one previous CS. The procedure was uncomplicated, with an estimated blood loss of 500mls. Recovery was uneventful and she was discharged home from hospital the following day.

She presented to the emergency department 6 days postpartum after collapsing at home. She had been feeling unwell with generalised abdominal discomfort for 2 days prior, with minimal lochia reported.

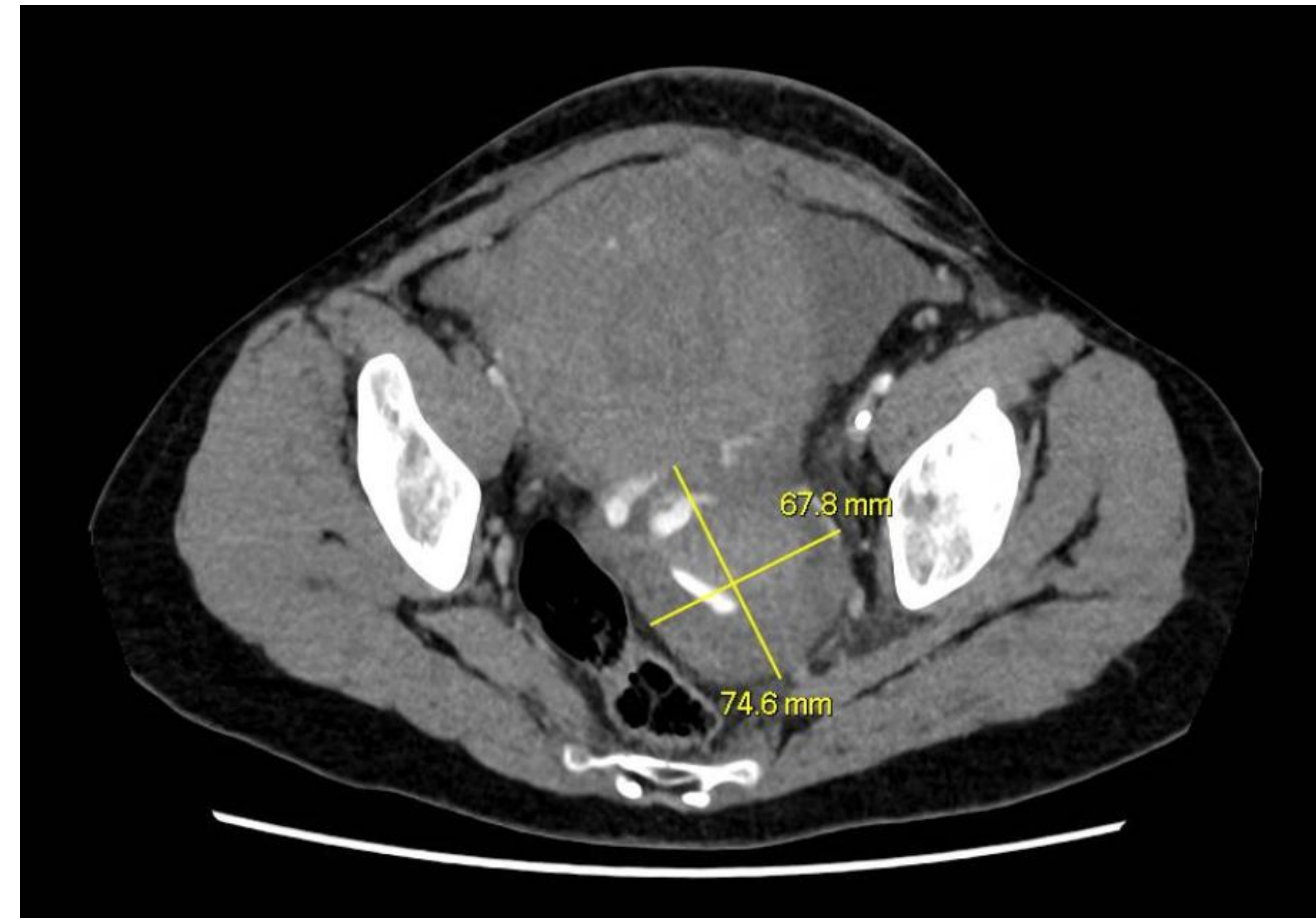
## INITIAL WORKUP

- Observations: HR 96, RR 21, temperature 34.6, BP 68/38, SpO2 99%
- Blood tests: Hb 76, WCC 35.5, Plt 341, Neu 31, Urea 7.5, Creatinine 123, eGFR 48, CRP 37
- Blood gas (venous): pH 7.27, Bicarb 20, Hb 83, Lactate 6.4

She was resuscitated with IV fluids and 2 units of packed red blood cells via femoral access. IV co-amoxiclav was commenced for treatment of suspected sepsis. Transfer to CT department was arranged once stabilisation was achieved.

## CT REPORT

- Active bleeding within the pouch of Douglas, likely originating from the left uterine artery.
- Heterogenous, encapsulated soft tissue focus within the pouch of Douglas may represent an organising haematoma or alternatively retained products of conception.



## MANAGEMENT

- Patient was taken to theatre for emergency laparotomy, where large haemoperitoneum was found within the pelvic cavity.
- Following clot evacuation a pelvic abscess was identified in the pouch of Douglas which had eroded into the left uterine artery and posterior wall of the uterus, additionally causing transection of the left ureter with subsequent hydroureter.
- The uterine cavity, tubes and ovaries were otherwise normal.
- Abscess was removed then subtotal hysterectomy performed to enable adequate surgical access to control the bleeding. Urology team completed re-anastomosis and stenting of the left ureter.
- Total estimated blood loss of 10 litres required:
  - 5 units of red blood cells
  - 4 units of Fresh frozen plasma
  - 2 units of cryoprecipitate
  - 1 unit of platelets
  - 3 units of cell salvaged blood

She was successfully extubated soon after surgery concluded, and received level 2 HDU care for 5 days. She developed post-operative ileus which resolved with conservative measures. She made a full recovery and was discharged home after 12 days of admission.

## DISCUSSION

We present the first recorded case of ruptured uterine artery due to erosion resulting from a postpartum pelvic abscess.

The most likely causative factor for PPA is endometritis. Risk factors for endometritis and therefore PPA include caesarean section, long labour, multiple vaginal examinations, prolonged rupture of membranes and lower socioeconomic status. In this particular case caesarean section was the only identifiable risk factor.

There is no previous documented case of uterine artery rupture following PPA. Uterine artery rupture is an extremely rare but important differential diagnosis in postpartum collapse. Swift action is required as the reported mortality rate is 30-40%[2]. Clinical signs and symptoms are often vague but can present with abdominal pain and shock.

Multidisciplinary approach was crucial: A&E and anaesthetic teams lead the initial resuscitation and stabilisation, radiology provided diagnostic imaging, laboratory and theatre teams organised the safe supply of blood products necessary, and the gynaecology, surgical and urology teams collaborated in the surgery.

Extubating someone in this context is not usual for such emergent surgery involving massive haemorrhage. The reason we were able to extubate was a testament to the fast mobilisation of senior staff, prompt and excellent resuscitation, along with decisive and early decision making, all of which contributed to the good outcome in this case.

With increasing numbers of complex caesarean sections occurring, the likelihood of similar incidents increases. Clinicians need to be aware of the life-threatening differential diagnoses of PPA with possible uterine artery rupture when presented with an acutely unwell postnatal patient.

## REFERENCES

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2. Duhan N., Sangwan N., Rajotia N., Kadian YS., and Singla SL. Spontaneous Uterine Artery Rupture at Delivery. *J Obstet Gynaecol India*. 2013; 63(1): 72-73. doi: [10.1007/s13224-012-0142-z](https://doi.org/10.1007/s13224-012-0142-z)