

# Rare Myometrial Abscess Following Cesarean Section: Diagnosis, Management, and Implications for Practice



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## Objectives

Myometrial abscesses, though rare, are a significant complication following uterine surgeries, including cesarean sections. Often misdiagnosed as hematomas, these abscesses can lead to serious maternal morbidity, including uterine loss and infertility, if not promptly recognized and treated. This report emphasizes the importance of early diagnosis and management of myometrial abscesses in febrile patients post-cesarean section to prevent adverse outcomes.

## Discussion

### Epidemiology & Diagnostic Pitfalls

- Intramyometrial abscesses are extremely rare (<0.2 % of post-CS infections).
- Early ultrasound often mimics a haematoma, delaying diagnosis by ~5 days in reported series.
- Cross-sectional imaging (CT/MRI) is advised if fever persists >48 h despite antibiotics, per RCOG maternal-sepsis guidance.
- **Microbiology & Pathogenesis**
- Typically polymicrobial: *E. coli*, *Bacteroides*, GBS, *Klebsiella*.
- Predisposing factors: prolonged ROM, emergency CS, diabetes, anaemia, obesity.
- Devitalised myometrium and retained blood create an ideal nidus.

### Imaging Features

- US: multiloculated, avascular hypoechoic mass with septations at LSCS scar; peripheral hyperaemia on Doppler.
- MRI: T2-hyperintense cavity with rim enhancement; map relation to bladder/bowel.
- Re-scan every 5–7 days to track response.

### Medical Management

- Broad Gram-negative/anaerobic cover (e.g., clindamycin + gentamicin ± ampicillin/tazocin).
- Continue IV until afebrile 48 h; total 4–6 weeks for multiloculated abscesses.
- Thrombocytosis  $>1000 \times 10^9/L$  warrants prophylactic LMWH.

### Surgical Options

- Percutaneous or transvaginal drainage possible but less effective
- Laparoscopic drainage preserves fertility; hysterectomy only for refractory sepsis or extensive necrosis.
- Review of postpartum uterine dehiscence: surgery successful in 88 %, hysterectomy 5 %.

## Case Report

### •Patient Profile:

- 28-year-old primigravida from Bangladesh.
- Underwent emergency CS for failure to progress in the **first stage of labor**.

### •Peripartum Events:

- Developed **clinical signs of sepsis** during labor:
- Fever and Elevated inflammatory markers

### •Initial Management:

- Postoperatively started on **broad-spectrum intravenous antibiotics**.
- Despite treatment, **persistent fever** was noted.

### •Diagnostic Findings:

- CT scan described as **hematoma** but Initial ultrasound showed a **multiloculated myometrial abscess** at the **uterine scar site**. - Size: **3.7 × 3.6 cm**

### •Antibiotic Regimen Initiated:

- **Gentamicin, Vancomycin, Clindamycin**
- **Escalated to Piperacillin–Tazobactam (Tazocin)**
- Antibiotics were **adjusted based on microbiology input**

### •Hematological Findings:

- **Platelet count  $>1200 \times 10^9/L$**  (marked thrombocytosis).
- Hematology review attributed it to an **inflammatory cause**.

### •Additional Management:

- Started on **high-dose prophylactic low-molecular-weight heparin (LMWH)** to reduce inflammatory thrombosis risk.
- **Antibiotic therapy was escalated**.

### •Follow-Up Imaging:

- **Repeat ultrasound** showed **reduction in abscess size**:
  - From **3.7 × 3.6 cm** to **2.0 × 2.7 cm**
- Indicated **partial resolution**.

### •Ongoing Plan:

- Microbiology team advised to continue **IV Tazocin for 4–6 weeks**.

### •Outcome:

- **Gradual resolution of fever**
- **Complete resolution of abscess** following prolonged antibiotic therapy.

## Conclusion

### Implications for Practice

- 1.High clinical suspicion:** persistent fever + uterine scar mass → prompt imaging.
- 2.Timely antibiotics:** initiate broad-spectrum early, adjust based on cultures.
- 3.Surgical strategy:** laparoscopy first-line; preserve uterus where feasible.
- 4.Preventive approach:** careful surgical technique, minimal diathermy, WHO-recommended prophylactic antibiotics.

### Future Pregnancy Management

- **Early specialist review in pregnancy** to assess uterine integrity and scar thickness.
- **Planned delivery** (typically by elective cesarean) at 37–38 weeks in subsequent

pregnancies to reduce uterine rupture risk.

- **Avoid prolonged labour or induction;** monitor closely for uterine scar complications.
- **Counsel on recurrence risk** and need for early intervention if fever or pain occurs postpartum.

### Research Directions

- Develop ultrasound criteria to differentiate haematomas vs abscesses.
- Define optimal antibiotic duration for complex uterine infections.
- Evaluate role of intra-abdominal negative-pressure drains to reduce recurrence.
- Study uterine healing and rupture risk following abscess resolution.

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