



Cesarean Section and Ongoing Management of Necrotizing Fasciitis in The U.S.: A Case Report of an Uncommon Occurrence After a Common Procedure

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Background

Necrotizing soft-tissue infections (NSTIs) are rare but life-threatening infections requiring rapid recognition and surgical intervention [1]. Following cesarean delivery, NSTIs may initially resemble common complications such as cellulitis, seroma, or surgical-site infection [1]. In the U.S., increasing maternal BMI is associated with increased risk of post-cesarean surgical-site and wound complications, with the greatest risk among patients with class III obesity [2,3]. We present a case of post-cesarean NSTI in a patient with class III obesity that initially appeared to be an infected wound seroma but progressed to deep abdominal wall infection requiring repeated operative debridement. This case emphasizes the importance of early recognition and surgical evaluation of progressive postoperative wound findings.

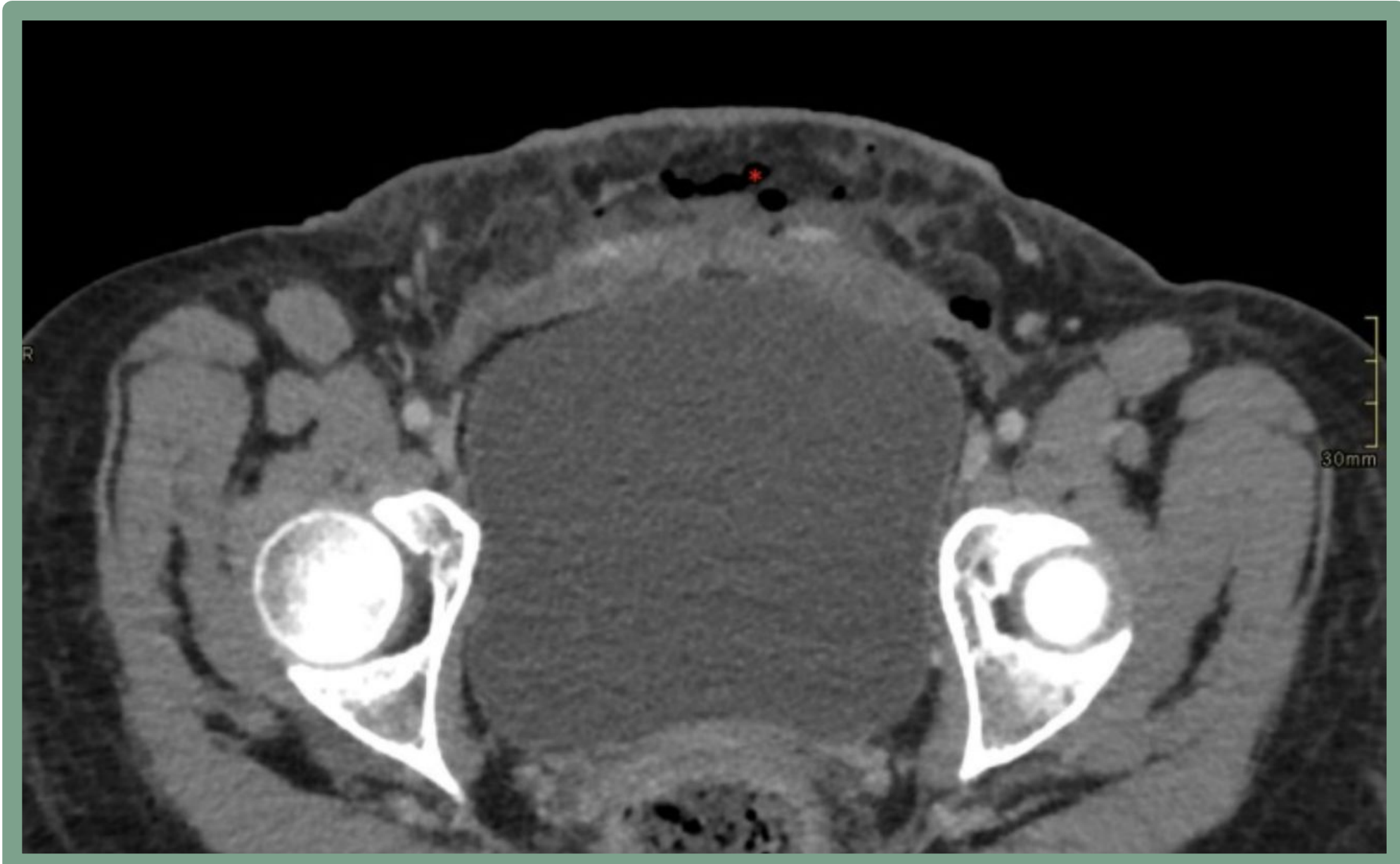


Figure 1. Contrast-enhanced abdominal/pelvic CT at initial hospitalization (November 2025)

Case Presentation

AA 31-year-old G2P1011 woman with a BMI of 51.2 kg/m² and chronic hypertension, underwent a primary low-transverse cesarean section at 37 weeks and 4 days following a failed induction of labor.

Eight days postpartum, she presented with increasing pain, erythema, and drainage from her Pfannenstiel incision accompanied by a low-grade fever. Examination revealed incisional erythema and induration with purulent drainage. The wound was initially managed as a postoperative seroma and wound infection with oral antibiotics, packing, and close follow-up.

Despite outpatient treatment, the wound progressed with worsening erythema, induration, and reported fevers. Cellulitis extended superiorly into the lower abdomen, raising concern for a deeper soft-tissue infection despite the absence of palpable crepitus. Urgent hospital evaluation and surgical consultation were obtained.



Figure 2.. Abdominal wound before operative debridement (January 2026)

Case Presentation

Clinical Stage	Presentation / Findings	Diagnostic Assessment	Clinical Significance
Cesarean Delivery	31-year-old G2P1011; BMI 51.2 kg/m ² ; chronic hypertension; primary LTCS at 37w4d after failed induction	Uncomplicated primary low-transverse cesarean delivery	Postoperative baseline
Postoperative Day 8	Increasing incisional pain, erythema, induration, low-grade fever, and purulent drainage	Initially diagnosed as postoperative seroma with cesarean wound infection	Oral antibiotics, wound packing, and close follow-up initiated
Clinical Progression	Continued fever with worsening erythema and induration extending into lower abdomen; no palpable crepitus	Concern for deeper soft-tissue infection / possible necrotizing process	Urgent hospital evaluation and surgical consultation
Operative Evaluation	Abdominal wall abscess with devitalized/necrotic tissue	Operative findings supported a severe deep soft-tissue infection	I&D, washout, sharp excisional debridement, wound VAC; second debridement required
Pathology & Culture	Necrosis with abundant abscess and acute inflammation involving deep muscle and subcutaneous fat	<i>Enterococcus faecalis</i> isolated; susceptible to ampicillin	Findings supported diagnosis of necrotizing soft-tissue infection
Follow-up Imaging	CT: soft-tissue thickening and inflammatory stranding through lower pannus into rectus musculature; no definite collection or large-volume gas	Persistent inflammatory changes without drainable abscess	Continued surgical and wound-care follow-up

Table 1. Clinical Timeline. Disease course from cesarean delivery through diagnosis and surgical management of necrotizing soft-tissue infection

Diagnostic Concerns & Clinical Course

Initial Presentation

- Localized erythema, induration, drainage, and presumed seroma
- Findings initially consistent with a superficial postoperative wound infection

Progression Despite Treatment

- Worsening symptoms despite wound drainage, packing, and oral antibiotics
- Raised concern for **deeper soft-tissue involvement**

Key Diagnostic Challenge

- No palpable crepitus** despite progression
- Absence of crepitus did **not exclude a necrotizing process**
- Similar deceptively limited presentations have been reported following cesarean delivery [4]



Figure 3. Progression of the abdominal wound throughout the clinical course (February 2026 - June 2026)

Discussion

Necrotizing fasciitis (NF) is a rare but life-threatening complication in obstetric practice, with post-cesarean experience largely limited to case reports. Pregnancy complications and comorbidities—including obesity, diabetes, hypertension, and immunocompromised states—are associated with increased NF risk. Obesity and preexisting hypertension confer 7.14- and 2.41-fold adjusted risks, respectively, and likely increased this patient’s susceptibility [5].

Diagnosis was challenging because the patient’s initially mild presentation resembled a postoperative seroma and evolved over multiple visits. Although earlier cross-sectional imaging and laboratory markers of deep tissue injury may have shortened the diagnostic interval, NF remains primarily a clinical diagnosis. Her LRINEC score of 5, conventionally categorized as low risk, illustrates that this tool cannot reliably exclude NF and should not supersede clinical judgment when a postoperative wound progressively worsens.

Multidisciplinary collaboration facilitated staged treatment and contributed to a favorable outcome. However, active smoking, housing instability, limited transportation, and difficulty obtaining home health services complicated wound healing and follow-up. This case highlights the importance of considering both clinical risk factors and socioeconomic barriers throughout NF management.

Conclusion & Acknowledgments

This case highlights the importance of early recognition and individualized risk assessment for necrotizing soft tissue infection in postpartum patients. While clinical risk factors may increase susceptibility, social determinants of health can significantly affect wound care and recovery. Recognizing these barriers and incorporating them into discharge planning and follow up, alongside timely multidisciplinary management, may improve outcomes in vulnerable postpartum patients.

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