Unusual Ambulatory Presentation of Necrotizing Soft Tissue Infection

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Introduction

- Necrotizing soft tissue infections (NSTIs) are severe, life-threatening infections that cause the rapid destruction of soft tissues, including skin, muscle, and fascia.
- Like most infections, NSTIs typically present with fever, elevated white blood cell count, and elevated pro-inflammatory markers such as ESR and CRP.
- Some NSTI's present variably, without overt signs of infection, challenging standard diagnostic criteria for NSTIs.

Case Presentation

- HPI: 56-year-old presenting with foul smelling sanguineous drainage from her right lower abdomen and groin for the past week
- PMH: HTN, DMII, HLD, Vertical banded gastroplasty more than 20 years ago, reversed about 10 years ago. Reversal was complicated by a ventral abdominal wall incisional hernia requiring repair with polypropylene mesh.
- Physical exam: Foul smelling serosanguineous drainage from right lower quadrant, necrotic skin changes, and erythema.
- Vitals/labs: Afebrile temperatures, tachycardia, leukocytosis, microcytic anemia, and hypokalemia.

Results



FIGURE 1



FIGURE 2

FIGURE 1: CT Abdomen and Pelvis axial view, showing a new 9 x 5.9 x 7.1 cm rim-enhancing fluid collection in the right lower ventral abdominal wall, with an air-fluid level. Findings concerning for a soft tissue abscess.

FIGURE 2: CT Abdomen and Pelvis sagittal view, showing overlying right lower abdominal wall skin thickening, soft tissue defects, free air, and inflammation

Operative Course

- Soon after arrival, patient was urgently taken to the operating room for debridement.
- Upon entry, it was found that the previous polyproline mesh had eroded into small bowel, causing the tissue infection.
- Patient underwent laparoscopic abdominal wound exploration without significant findings.
- Small bowel resection and ventral hernia repair were performed.
- Within the next 2 weeks she required 5 more subsequent wound debridement's and gradual external oblique closure.

Conclusion/Discussion

- Patient was discharged on oral antibiotics and fully recovered.
- Classic NSTI cases have rapid onset of severe pain, erythema, skin necrosis, and signs of end organ failure; while others may progress insidiously with vague, non-specific symptoms, delaying recognition.
- This variation may relate to the causative organism:
  - Type I infections are usually polymicrobial and seen in patients with multiple comorbidities (which our patient was categorized under due to his comorbidities and infection with E. raffinosus)
  - Type II infections are monomicrobial and often caused by Group A Streptococcus
  - Type III is rare, linked to specific geographic locations like Vibrio vulnificus.