



Necrotizing Soft Tissue Infection

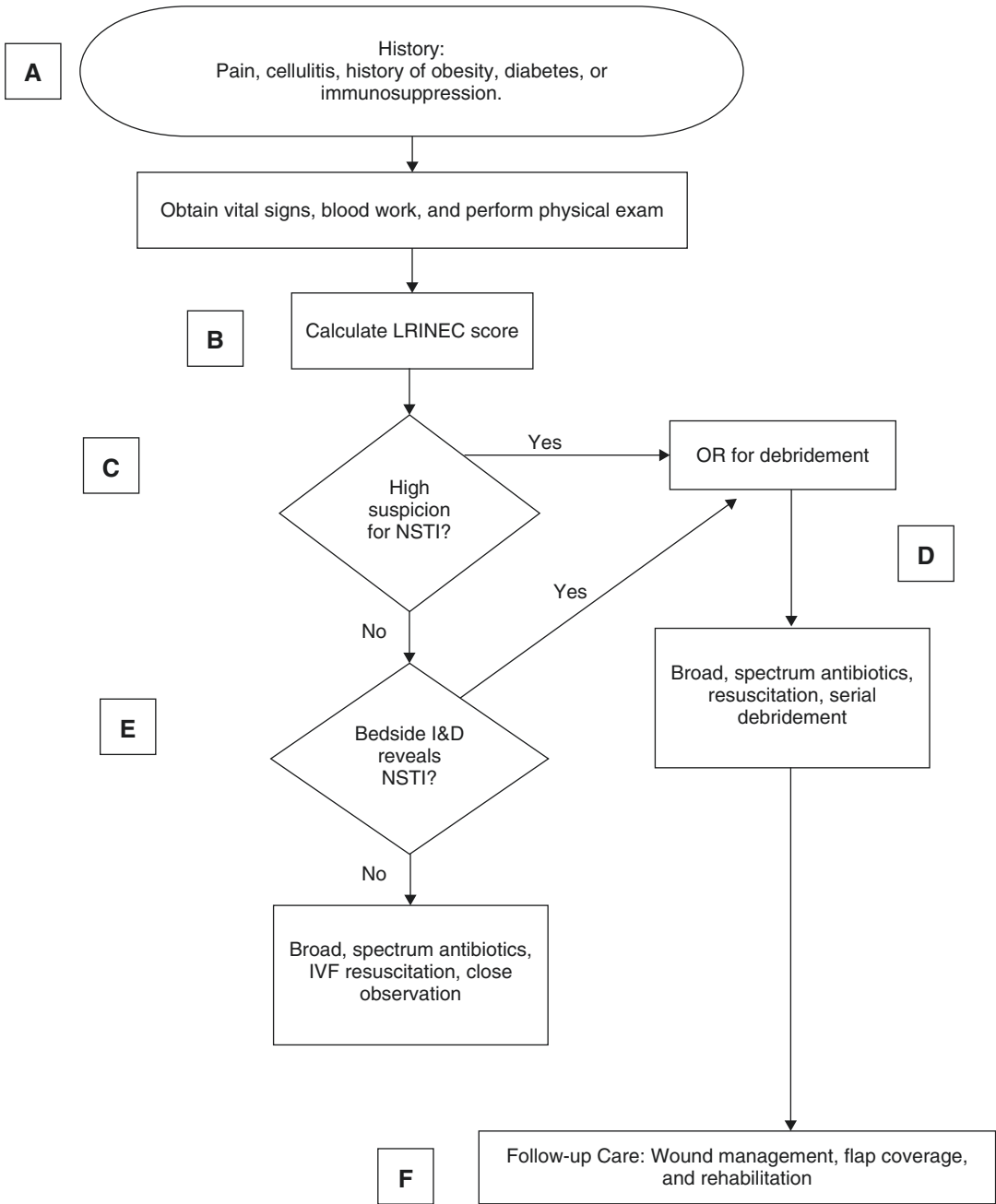
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Algorithmic Approach

- A. Patients with necrotizing soft tissue infections (NSTI) will often have a history of obesity, diabetes, immunosuppression, or recent surgery or trauma. A hallmark is pain out of proportion to the physical exam findings. They may have fever, tense edema, bullae, ecchymosis or necrosis of the skin, cutaneous anesthesia, and evidence of systemic toxicity. NSTIs most commonly involve the extremities, perineum, and genitalia [1, 2].
- B. Laboratory analysis should include a CBC, complete metabolic panel, and CRP. The LRINEC (laboratory risk indicator for necrotizing fasciitis) can aid in decision-making. This score includes WBC (1 point for WBC 15–25, 2 points for WBC >25), hemoglobin (1 point for Hgb 11–13.5, 2 points for Hgb <11), CRP (4 points for CRP \geq 150), sodium (2 points for Na <135), glucose (1 point for glucose >180), and creatinine (2 points for Cre >1.6). If the LRINEC score is \geq 6, there is a high likelihood of NSTI [3].
- C. The patient should be appropriately resuscitated. NSTIs are often polymicrobial, and the patient should be started on broad-spectrum antibiotics, including coverage for gram-positive cocci, gram-negative rods, and anaerobes, including clostridial species (penicillin G, vancomycin, gentamicin, clindamycin). NSTI is a surgical emergency, and nonoperative management is associated with almost 100% mortality [4]. Excision should extend to healthy, bleeding tissue at all margins and tissue should be sent for culture.
- D. Patients typically require ongoing critical care support after surgery, including resuscitation, broad-spectrum antibiotics, and management of comorbidities. They should return to the operating room within 24 h for further evaluation, and debridement if necessary. Patients with necrotizing soft tissue infections will likely require serial debridement with most patients requiring 3–4 operative debridements.
- E. Patients with lower index of suspicion can be evaluated by bedside debridement. If the surgeon is easily able to slide a finger along the fascial plane and finds evidence of necrotic tissue or “dish water fluid” on bedside I&D, the patient should be taken to the OR for surgical debridement.
- F. Follow-up care: Patients will require a multidisciplinary team to aid in recovery. They will require rehabilitation, wound management, and possible flap coverage.

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Algorithm 5.1

References

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