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Figure 1 View of the right shoulder.



Figure 2. Radiograph of the right shoulder. Used with permission of Henry Z. Pitzele, MD, Section of Emergency Medicine, Jesse Brown VA Medical Center, Chicago, IL.

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A 65-year-old smoker with no known medical history presented to a Veterans Affairs emergency department with pain for 4 days after a fall forward onto his shoulder at home. On physical examination, the patient was afebrile and tachycardic to 110 beats/min. His right shoulder was warm and foul smelling and had a large area of black necrotic tissue and subcutaneous bullae, with surrounding swelling and erythema (Figure 1). Crepitus was palpable superiorly and anteriorly. Radiograph of the shoulder revealed no dislocation, a prominent air-fluid level, and subcutaneous emphysema (Figure 2).

For the diagnosis and teaching points, see page 578.

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DIAGNOSIS:

Necrotizing fasciitis. Necrotizing fasciitis is an uncommon, rapidly progressive infection involving the fascia and subcutaneous tissue. In type 1, isolates are polymicrobial and synergistic.¹ Our patient's original blood culture grew oxacillin-resistant *Staphylococcus xylosum*. Wound culture from postoperative day 1 grew *Streptococcus anginosus/milleri*. Type 2 involves *Streptococcus pyogenes* alone or in combination with *Staphylococcus aureus*. Exotoxins secreted by pathogens in each type enhance their virulence and accelerate the progression of infection.² Predictors of mortality include age, depth of the primary site of infection, and associated comorbidities, such as diabetes mellitus, peripheral vascular disease, alcoholism with chronic liver disease, and cancer with immunosuppression.^{1,2} However, the most significant predictor of mortality is time to surgical intervention.² Our patient was taken urgently to the operating room for debridement and returned 3 times for additional debridements and eventually a skin graft. Five-month follow-up showed excellent recovery and take of skin grafts, although there was a lack of abduction past 70% because of the extensive deltoid debridement.

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