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IMAGES IN INFECTION

An unusual clinical presentation of necrotizing fasciitis

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A 62-year-old man presented with painful soft-tissue edema on the dorsal right thorax, after draining a skin boil using a sewing needle 6 days earlier. He had similar episodes of infected skin boils in the past. He was an overweight smoker (30 packyears) with a newly diagnosed diabetes mellitus. On physical examination, he was afebrile, blood pressure 110/80 mmHg, and pulse 100′/min. Local findings included tender erythema, crepitation and fluctuation indicating subcutaneous emphysema and abscess. Blood tests showed a white blood cell count of 26 (normal 4–10) 10^9/L and a CRP level of 486 (normal < 5) mg/L. Intravenous antibiotic treatment with amoxicillin/clavulanate and clindamycin was started. Computed tomography revealed a large subcutaneous emphysema alongside the right costal trunk (Fig. 1a). The differential diagnosis included necrotizing fasciitis and gas gangrene. Debridement was performed, and large areas of necrotic and already disintegrated subcutaneous tissue were evident intraoperatively (Fig. 1b). The macroscopic findings indicated a chronic process. *Actinotignum schaalii*, *Actinomyces radingae*, and a polymicrobial anaerobic flora consisting of peptostreptococci, *Prevotella* sp., *Porphyromonas* sp. and *Campylobacter ureolyticus* grew in intraoperatively obtained biopsies. Histopathology demonstrated mixed neutrophilic fibrinous inflammation with areas of necrosis (Fig. 1c). The further clinical course was uneventful. Antibiotic treatment with amoxicillin/clavulanate was continued for 2 weeks, and the patient was in good health 5 months later.

Polymicrobial NSTIs typically involve *Peptostreptococcus* spp., *Prevotella* spp., *Fusobacterium* spp., *Bacteroides* spp., and Enterobacterales, depending on infection site [1]. The involvement of *Actinomyces* spp. in necrotizing soft-tissue infections (NSTIs) is rare [2, 3]. The macroscopic intraoperative findings were consistent with a chronic process though the clinical presentation was acute, but not fulminant. It illustrates the difficulty in categorizing this case in the traditional classification of NSTIs [4, 5].

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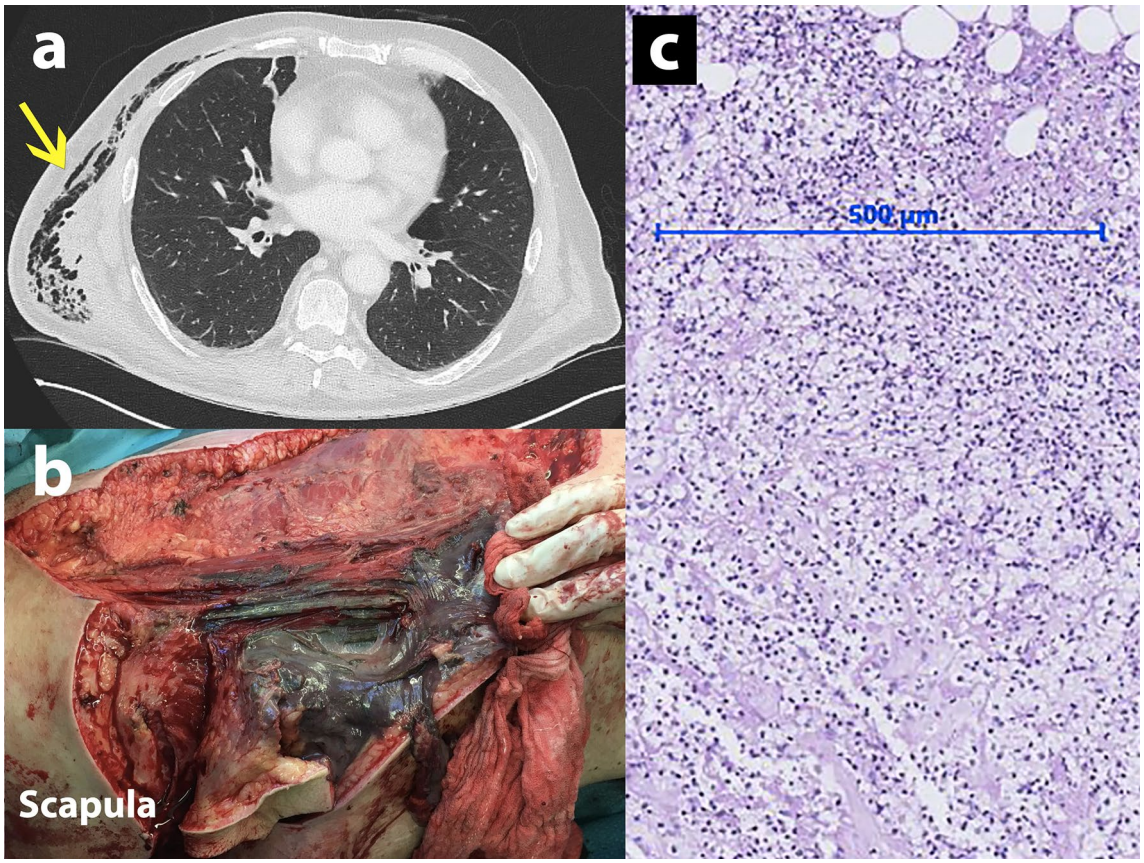

Fig. 1 **a** Large subcutaneous emphysema on the CT scan. **b** Intraoperative findings with already disintegrated tissue. **c** Histopathology (hematoxylin and eosin stain) showed mixed neutrophilic fibrinous inflammation with necrosis but no signs of actinomyces-induced sulfur granules

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Compliance with ethical standards

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