Successful Treatment of Necrotizing Fasciitis due to Group A *Streptococcus* with Impending Toxic Shock Syndrome

*Key words:* necrotizing fasciitis, group A *Streptococcus*, toxic shock syndrome

Figure 1. Axial computed tomography of the calfs showed a honeycomb-appearance (asterisk) within the subcutaneous tissue and a low-density collection of fluid (arrow) in the posterior aspect of the left calf.

Figure 2. Deep incision of the affected calf disclosed subcutaneous tissue redness, fascial thickening, and subfascial purulent fluid.

Figure 3. Histopathology of the removed tissue showed scattered necrosis, vascular thrombosis, and neutrophilic inflammation, which were consistent with necrotizing fasciitis (HE stain, ×150).

Figure 4. Gram staining of the purulence showed gram-positive streptococci (×400).
A 40-year-old previously healthy man was admitted to our hospital because three days previously he noticed increasing pain, swelling and erythema in the left calf. His temperature was 39.5°C, pulse 118 and blood pressure 89/54 mmHg. Marked leukocytosis (23,000/µl) and hepatic dysfunction were noted. Axial computed tomography of the calves (Fig. 1) showed a honeycomb-pattern (1) of the subcutaneous fat (asterisk) and a low-density collection of fluid (arrow) in the posterior aspect of the left calf. Emergent incision disclosed subcutaneous redness, fascial thickening, and subfascial purulent fluid (Fig. 2). Histopathology of the removed tissue confirmed necrotizing fasciitis (Fig. 3) and Gram staining of the purulence showed gram-positive cocci with short chains (Fig. 4). Subsequent culturing produced group A streptococci. Early and intensive treatment including aggressive debridement, antibiotics (12 g of ampicillin-sulbactum and 2,400 mg of clindamycin, daily), and immunoglobulin (2.5 g daily) administration (2) successfully inhibited further progression of life-threatening streptococcal toxic shock syndrome and the patient has fully recovered.

References


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