

Subacute necrotising fasciitis

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An 82-year-old woman presented in March, 2004, complaining of swelling and mild pain in her right hand for the past 6 days. She had no medical history of note, and reported no trauma to the affected hand. She had previously consulted two general practitioners, both of whom attributed the swelling to disuse and fluid overload and prescribed symptomatic treatment. Her hand gradually became dusky with fixed discolouration starting from her middle finger migrating proximally to involve the entire hand. She was brought to our hospital when she complained of persistent pain, developed a slight fever, and the skin on her hand had started to peel with gentle pressure. Upon admission, her right hand was necrotic and foul smelling. She was febrile (37.6°C) and her blood pressure was 125/75 mm Hg. Her leucocyte count was 22.9×10^9 /L and C-reactive protein was 226 mg/L. Plain radiographs of the hand showed no gas in the soft-tissue planes.

Our differential diagnoses included cellulitis or gangrene secondary to peripheral vascular disease, but we admitted her with a presumptive diagnosis of necrotising fasciitis. We started high-dose parenteral penicillin, cloxacillin, and clindamycin. We re-examined her at regular intervals and noted rapid migration of the margin of tenderness and violaceous erythema from her wrist up her forearm (figure). We did an emergency debridement 8 h after admission, and dissected down to necrotic fascia finding foul smelling "dish water" pus. In view of the patient's condition, we decided to amputate the arm through the elbow. Cultures of the débrided tissue grew *Proteus mirabilis* and *Enterococcus* species. Blood cultures were sterile. Histological examination of tissue specimen confirmed the diagnosis of necrotising fasciitis (figure). We débrided the wound a second time, and did a delayed primary closure of the amputation stump, and discharged the patient after 10 days. When last seen in May, 2004, she was doing well, and had adjusted admirably to her amputation.

There are two distinct forms of necrotising fasciitis, distinguished by their causative organisms. Type I is polymicrobial and type II is caused by group A Streptococcus.¹ Patients with necrotising fasciitis usually present with a sudden onset of severe pain, and run a fulminating course, rapidly developing high fever, hypotension, and multi-organ failure.¹⁻³ However, the subacute form presents as a slowly progressive soft-tissue infection over a period of days to weeks, with minimal pain and sometimes no associated constitutional symptoms such as fever or hypotension.^{4,5} Unsuspecting physicians may consider patients "too well" to entertain the diagnosis of necrotising fasciitis. This leads to a delay in diagnosis with catastrophic outcomes.



Figure: (Top) the crythema moved up her forearm within 6 h of admission (arrows). (Bottom) histology.

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