

# Symmetrical necrotising chest wall infection following paronychia

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## Abstract

**Paronychial infection is a common condition seen in the accident and emergency department. Treatment is by antibiotics or incision and drainage under local anaesthetic. Complications are rare but may occur if treatment is delayed or inadequate. A case is described of symmetrical necrotising chest wall infection, of unusual anatomical distribution, that occurred following a paronychia and required surgical debridement and skin grafting.**

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**Keywords:** paronychia; necrotising infection; chest wall

Paronychia is a common infection affecting the nail bed and frequently presents to the accident and emergency (A&E) department. Failure to

respond to antibiotics may require incision and drainage under local anaesthetic. However, significant local and systemic complications can ensue if a paronychia remains unrecognised or inadequately treated, especially in diabetic or immunocompromised patients. Reported complications include spreading hand infections, osteomyelitis,<sup>1</sup> and more rarely malignant degeneration<sup>2</sup> and septic arthritis of distant joints.<sup>3</sup> We present a further complication due to an unresponsive paronychia.

## Case report

A previously fit 55 year old man had a paronychia of his left index finger (fig 1A) which failed to respond to a course of antibiotics prescribed by his general practitioner. He presented to the A&E department two weeks later with general malaise and fever and a swollen index finger, which had partially discharged purulent material a few days earlier. He was admitted to hospital and became increasingly unwell over the next few hours due to sepsis and deteriorating renal function which required renal support and high dose parenteral antibiotics. In addition, he developed an unusual confluent, symmetrical, erythematous and vesicular "butterfly" rash over the anterior chest wall. The rash developed into a full thickness, necrotic eschar with clinical features suggestive of a non-clostridial synergistic necrotising fasciitis (fig 1B). This was subsequently supported by histological findings. Blood cultures, vesicular aspirates from the rash, and wound swabs from the site of the paronychia were all positive for a mixed infection of group A  $\beta$  haemolytic streptococcus and coagulase negative staphylococcus. He required extensive surgical debridement and split skin grafting to the wound which subsequently healed without problems. He was discharged home well three weeks later.

## Discussion

Paronychia is the commonest of all hand infections. Staphylococcus and streptococcus species are the prevalent microorganisms involved, although tuberculous, fungal, and herpetic infections have also been described. Complications, however, are rare and surgical drainage in the A&E department is usually all that is required to avoid such sequelae. Non-clostridial necrotising fasciitis is a rapidly progressing mixed synergistic infection of the fascia and subcutaneous tissues. It is usually due to mixed anaerobic and aerobic organisms such as haemolytic streptococci or staphylococci, although the causative organisms vary according to site. Management of this potentially fatal condition is radical surgical debridement and high dose parenteral antibiotics. Hyperbaric

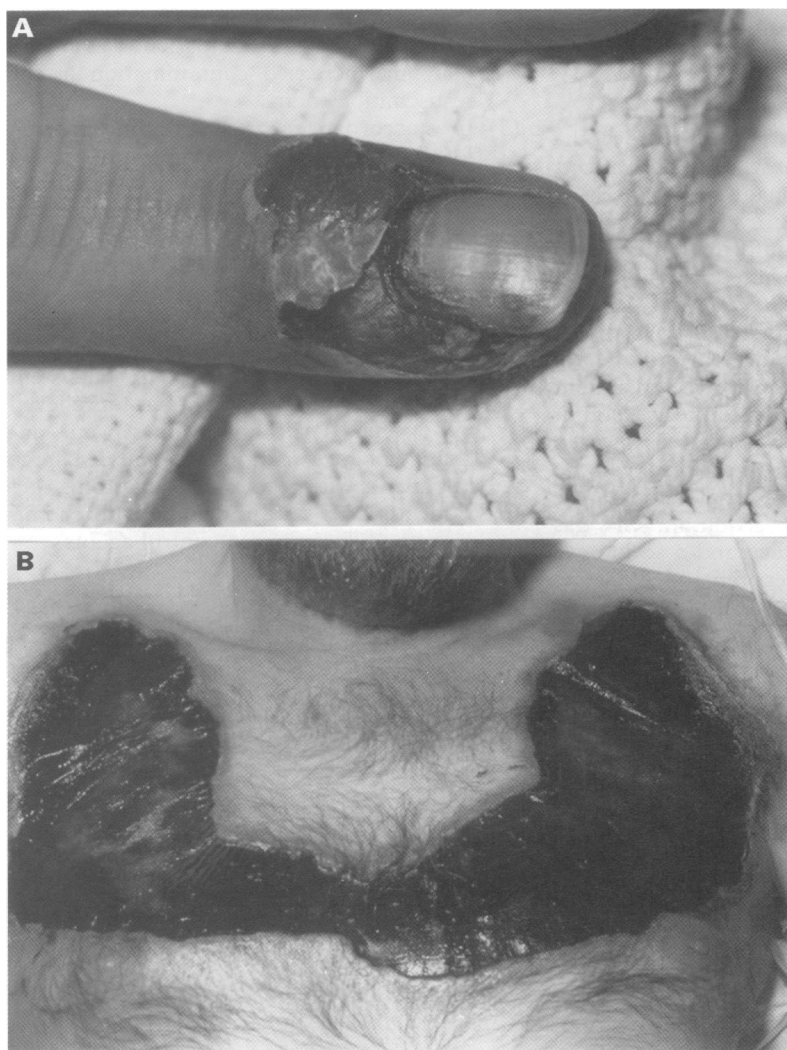


Figure 1 (A) Paronychia of left index finger. (B) Full thickness, black, necrotic eschar on chest wall (3 days postadmission). Note the unusual anatomical distribution.

oxygen may also be used as adjuvant treatment in refractory cases, though its effectiveness is controversial.<sup>4</sup> As far as we are aware necrotising fasciitis has not previously been described following a paronychia. What is more unusual is the anatomical basis for the distribution of the rash, which we are currently unable to explain.

In summary, we have presented an unusual manifestation of a common condition and reaffirm the need for early drainage of all paronychias presenting to the A&E department.

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## Infratemporal and temporal fossa abscess complicating dental extraction

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### Abstract

**Abscess formation in the infratemporal and temporal fossae is rare. Their presentation to accident and emergency departments is unusual and consequently may cause problems with diagnosis. Once diagnosed, treatment should be aggressive with intravenous antibiotics and surgical drainage.**

(*J Accid Emerg Med* 1998;15:59-67)

Keywords: dental extraction; temporal fossa; infratemporal fossa; abscess

### Case report

A 57 year old married white male presented to the accident and emergency (A&E) department complaining of severe shooting pains on the left side of his face, and difficulty in eating, opening his mouth, and sleeping. Three weeks previously his general dental practitioner extracted his upper left first molar tooth under

local anaesthetic. His symptoms developed slowly after this procedure, despite two courses of antibiotics from the practitioner.

Examination within the A&E department showed him to be pyrexial (40°C) with signs of systemic sepsis. He had severe trismus, and light palpation of the left side of his face triggered sharp radiating pains in all dermatomes of the left trigeminal nerve. The left temporal area was warm, red, and mildly swollen. All branches of his facial nerve functioned normally. The upper left first molar socket was healing normally. There was no cervical lymphadenopathy.

Occipitontal, lateral facial, and panoramic radiography was normal. A full blood count was unremarkable; however, the erythrocyte sedimentation rate was raised at 62 mm/h. Routine biochemistry studies showed a mild hypokalaemia (plasma potassium 3.2 mmol/litre).

The patient was admitted under the care of the maxillofacial surgeons and prescribed intravenous cofluampicil and metronidazole as well as analgesics.



Figure 1 Axial computerised tomography showing lesion in left infratemporal fossa.

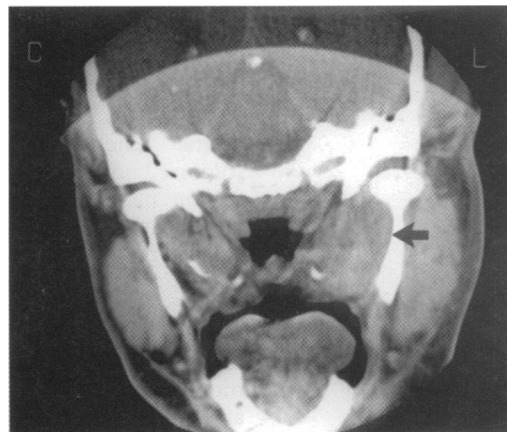


Figure 2 Coronal computerised tomography showing loss of normal anatomical definition in left infratemporal fossa due to lesion.