

Case report

Sausage digit due to radish bacillus

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SUMMARY We wish to draw attention to a very characteristic but little known syndrome. An elderly woman presented with a 'sausage finger', rheumatological jargon used to describe diffuse swelling of the digit. This proved to be a proliferative tenosynovitis caused by an atypical mycobacterium, *Mycobacterium terrae*, or the radish bacillus.

Case report

A 66-year-old woman presented with a 5 week history of pain and swelling of the right index finger. She was a keen gardener and remembered pricking her finger with a blackberry thorn 6 months earlier. The finger had been swollen for 1 week but had settled spontaneously. She had a past history of localised follicular lymphoma treated by radiotherapy. She had remained free of recurrence for 6 years, and there was no other evidence that she was immunocompromised. Examination revealed a sausage digit with diffuse swelling, warmth, and tenderness.

A diagnosis of flexor tenosynovitis was made and she was treated with indomethacin. This produced no benefit and the finger was therefore explored. At operation there was a florid proliferative tenosynovitis, and extensive synovectomy was carried out. She made an uneventful recovery, and good but not full flexion of her index finger was achieved.

Histological examination of the tendon sheath showed an active chronic tenosynovitis. There was extensive fibrinous deposition within the sheath, with surrounding granulomatous inflammation composed predominantly of lymphocytes and epithelioid histiocytes. There was no caseation necrosis. A modified Ziehl-Neelsen stain (Wade-Fite) revealed several small groups of acid-fast bacilli which were shorter and thicker than typical *Mycobacterium tuberculosis*.

Cultures of the excised tissue grew *Mycobacterium terrae*.

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Discussion

This case presented a serious diagnostic challenge to clinicians and pathologists, though the condition is well described in the literature. Kelly *et al.*^{1,2} described 19 cases of atypical mycobacterial infection in orthopaedic practice, of which 11 involved tendons. They emphasised the frequency of local trauma as the portal of entry of the organism. For example, 2 of their patients were involved in killing or cleaning chickens and became infected with *Mycobacterium avium*. Injection of corticosteroids also appeared to be capable of introducing the organism. Excision of the involved tendon sheath was sufficient treatment in most cases.

Mycobacterium terrae was considered to be non-pathogenic until Edwards *et al.*³ described an infection in a patient with Fanconi's pancytopenia. This patient presented like ours, with a swollen erythematous forefinger which was presumably ascribed to rheumatoid arthritis, since it was treated with anti-inflammatory drugs, corticosteroids, and gold. Sixteen months later the wrist became involved with a chronic proliferative synovitis, and it was only after synovectomy that the diagnosis was made. Hall *et al.*⁴ reported another case, again presenting with a painful swollen finger.

In our case the atypical mycobacterium presumably gained entry via the prick of the thorn, as *M. terrae* can be found in soil and vegetables. It was first isolated from radish washings. This type of infection must therefore be added to the list of known rheumatological hazards of gardening. They include plant thorn synovitis and sporotrichosis as well as more obvious disasters like backache and tennis elbow. Mysterious proliferative tenosynovitis,

like mysterious proliferative synovitis in a joint, deserves biopsy for histological and bacteriological examination.

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References

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