

# Osteolysis of the terminal phalanges of the hand

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## DESCRIPTION

A 56-year-old woman presented to the hand clinic, with a 6-month history of progressive painful and swollen acra, resulting in a weakened grip. Her medical history included psoriasis vulgaris since 2006, with progressively worsening skin abnormalities. She could not relate the symptoms to any history of trauma. On examination, she had painful and swollen digits 1 and 3 on the left and digits 1, 3 and 4 on the right hand, including typical nail abnormalities (figure 1). C reactive protein, erythrocyte sedimentation rate and parathyroid

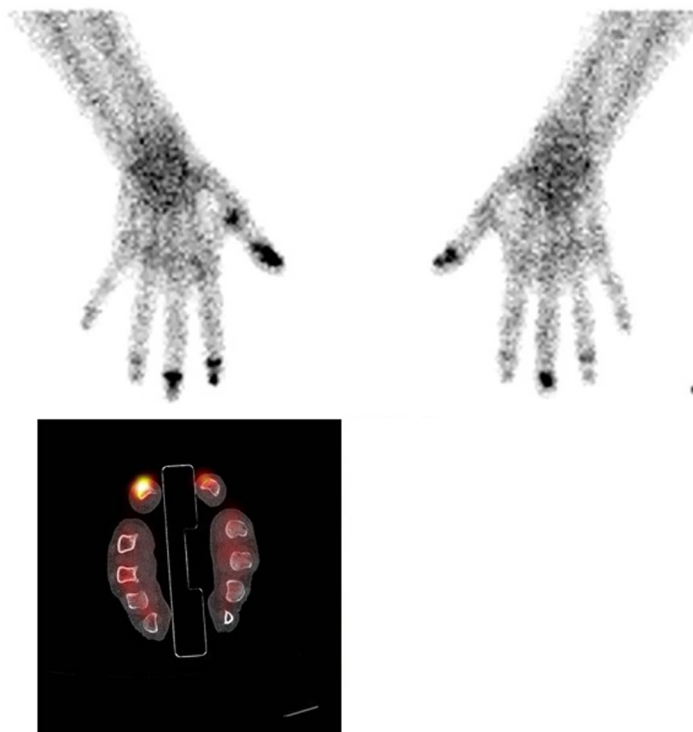
hormone were not raised. Radiographs and MRI showed severe osteolytic lesions of the distal phalanx of digits 1 and 3 on the right and digit 1 on the left hand (figure 2). Additionally, a technetium bone-scan and single photon emission CT showed increased activity in several terminal phalanges (figure 3). A biopsy of the right index finger showed an inflammatory reactive process, with no



**Figure 1** Typical psoriasis unguium with onycholysis (loosening of the nail), oil drops and onychia punctata (signs of pitting and thimble-shaped nails).



**Figure 2** Left: X-ray with signs of osteolysis of the distal phalanx of digit 3. Right: MRI of the right hand focusing on the distal phalanx of digit 3.



**Figure 3** Bone-scan showing increased activity in the distal phalanges of digits 1, 2 and 3 of the left hand as well as digits 1 and 3 of the right hand. Notice the increased activity in the 1st metacarpalphalangeal joint in the left hand. Left: single photon emission CT showing increased activity at the dorsum of interphalangeal joint of digit 1.



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## Learning points

- ▶ Acro-osteolysis psoriatica is a reactive form of osteolysis of mainly the distal phalanges. Acro-osteolysis is seen in a number of conditions including psoriasis, Ehlers-Danlos syndrome, systemic sclerosis, leprosy and vinyl chloride disease.
- ▶ Patients with psoriasis, worsening skin abnormalities, nail abnormalities and painful swollen acra should be treated in a multidisciplinary (dermatologist, intern doctor, orthopaedic surgeon) setting.

signs of malignancy. In summary, we present a case of severe acro-osteolysis psoriatica. In response to our conclusion, the dermatologist started light therapy and reserved the option of using methotrexate.

Our patient was diagnosed with acro-osteolysis, a rare presentation of osteolysis of the distal phalanges seen in a number of conditions including psoriasis vulgaris, Ehlers-Danlos syndrome, systemic sclerosis, leprosy, sarcoidosis and rarely in Raynaud's disease.<sup>1 2</sup> The exact incidence, prevalence and pathogenesis is unclear.<sup>1 2</sup>

**Contributors** SM wrote the article, performed the literature search and is the guarantor. GK identified the case, conceived the idea for and reviewed article and are the corresponding authors.

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**Patient consent** Obtained.

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## REFERENCES

- 1 Ory PA, Gladman DD, Mease PJ. Psoriatic arthritis and imaging. *Ann Rheum Dis* 2005;64(Suppl 2):ii55–7.
- 2 Datta PK, Ghosh S, De A. Idiopathic non-familial acro-osteolysis: a rare case report. *Indian J Dermatol* 2012;57:486–8.

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