Painful nail lesions

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Case study

A man, 58 years of age, presented with a 4 year history of painful lesions of his nails. His previous history included hypertension, diabetes mellitus and hyperlipidaemia. These were treated with enalapril, metformin and simvastatin respectively. He also had asymptomatic skin lesions for over 15 years that had worsened in the past 4 years. His father had similar nail lesions that had been diagnosed as onychomycosis.

Figure 1. Patient's nails showing distal onycholysis, occasional yellow-red discoloration, and proximal pitting

Physical examination revealed involvement of all the nails, with distal onycholysis, occasional yellow-red discoloration resembling a drop of oil beneath the nail plate, and proximal pitting (*Figure 1*). There were also extensive erythematous and desquamative patches along the trunk and extremities (*Figure 2*).

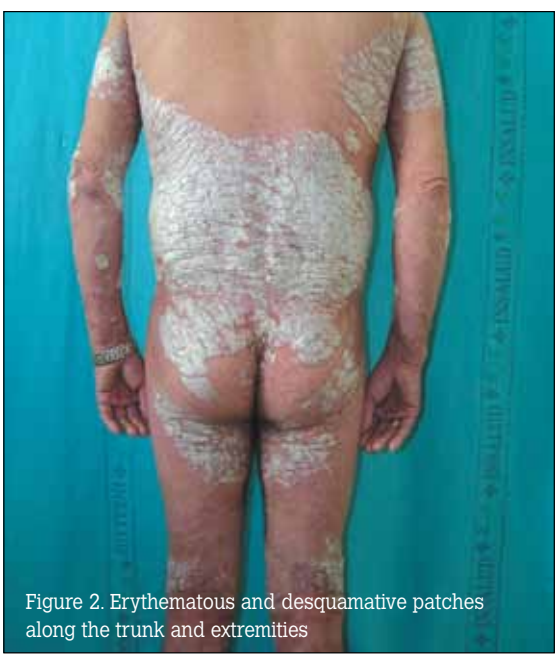

Figure 2. Erythematous and desquamative patches along the trunk and extremities

Laboratory evaluation revealed hyperglycaemia and hyperlipidaemia with no other relevant findings. Neither clinical nor radiological signs of arthritis were detected.

Question 1

What is the most likely diagnosis?

Question 2

How frequently are nails involved in this condition?

Question 3

What are the typical nail signs of this condition?

Question 4

What are the treatment options for nail involvement such as this?

Answer 1

Based on the typical nail and skin lesions, a clinical diagnosis of psoriasis with onychopathy is likely. Onychomycosis may have similar nail findings but does not have the characteristic skin lesions.

Answer 2

The nails are involved in up to 50% of patients with psoriasis to varying degrees.[1] The diagnosis of psoriatic nail disease without cutaneous psoriasis is often challenging.

Answer 3

Psoriatic nail disease has many clinical manifestations including:

- oil drop or salmon patch: the most diagnostic sign involves translucent, yellow-red discoloration in the nail bed resembling a drop of oil beneath the nail plate
- pitting: results from the loss of parakeratotic cells from the surface of the nail plate
- beau lines: transverse lines in the nails due to intermittent inflammation causing growth arrest lines
- leukonychia: areas of white nail plate due to foci of parakeratosis within the body of the nail plate

- subungual hyperkeratosis: affects the nail bed and the hyponychium. Excessive proliferation of the nail bed can lead to onycholysis
- onycholysis: white area of the nail plate due to a functional separation of the nail plate from its underlying attachment to the nail bed. Usually starts distally and progresses proximally, causing a traumatic uplifting of the distal nail plate. Secondary microbial colonisation may occur
- nail plate crumbling: due to disease of the underlying structures
- splinter haemorrhage: longitudinal black lines due to minute foci of capillary haemorrhage between the nail bed and the nail plate. This is analogous to the Auspitz sign of cutaneous psoriasis, which is the pinpoint bleeding seen beneath the psoriatic plaques
- spotted lunula: erythematous patch of the lunula.

Answer 4

Many treatment options are available for nail psoriasis including: topical corticosteroids, intralesional corticosteroids, topical calcipotriol, topical anthralin, topical cyclosporine, topical tazarotene, psoralen plus ultraviolet light A (PUVA), photodynamic and laser therapy, avulsion therapy, and systemic therapy for severe cases.

This patient underwent treatment with PUVA three times per week and methotrexate at a dosage of 20 mg/week. His nail involvement was managed with topical clobetasol twice per day with an excellent response within 3 months.

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Reference

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