



Internal Medicine Flashcard

Painful fingernails in a patient with chronic fibrosing pulmonary aspergillosis

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1. Case description

A middle aged male, farmer by occupation was diagnosed with chronic fibrosing pulmonary aspergillosis due to *Aspergillus flavus*. He was started on oral voriconazole (400 mg/day) after he had poor clinico-radiological response to itraconazole. After a month of initiating voriconazole, he presented with bleeding and painful fingernails. Examination revealed tender separation of distal nail plates from nail bed (onycholysis) with hemorrhagic blisters beneath, in multiple fingernails (Fig. 1a). Onycholysis was crescentic with well-defined proximal erythematous rim that was concave distally (Fig. 1b). Diffuse blanchable erythema was present on his face, upper chest and dorsa of forearms. There was no blistering, hypertrichosis, milia, skin induration or history of trauma to nails. Tests for anti-nuclear antibodies, and serum porphyrins were normal. Plasma voriconazole (1.6 mg/dL) levels were within therapeutic range.

1.1. What is your diagnosis?

A diagnosis of acute phototoxicity and photo-onycholysis secondary to voriconazole was considered. Voriconazole was stopped and he was advised nebulized amphotericin B (10 mg twice daily on alternate days), photoprotection, broad-spectrum sunscreens, opaque nail varnish and oral antioxidants. Onycholysis resolved after 6 weeks leaving mild scarring on thumbs.

2. Discussion

Photo-onycholysis is painful separation of nail plate from nail bed after intense exposure to UV radiation (UVR). Certain drugs like retinoids, tetracyclines, fluoroquinolones and psoralens decrease the threshold of UVR required to produce photo-onycholysis [1].

The characteristic polydactylous involvement with half-moon shaped, crescentic distal onycholysis is the most common type, as seen



Fig. 1. (Panel A and B): Photograph of fingernails and thumbs, revealing crescentic onycholysis with well-defined proximal erythematous rim and distal concavity. Changes are more pronounced on thumbs and index fingers, where hemorrhagic blisters are present.

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in the index case. It usually affects the central and distal parts of the fingernails (exposed) while the thumbnails (protected by fingers) are usually spared. Conversely, in a person involved in an occupation that involves gripping of tools in sunlight, thumbs are the most photo exposed appendages and are more predisposed, as also seen in the index case (due to farming) [1].

Dermatological adverse reactions seen with voriconazole include phototoxicity, pseudoporphyria, discoid lupus, accelerated photo-ageing, actinic keratosis, and melanoma and non-melanoma skin cancer. Phototoxicity after voriconazole is thought to result from accumulation of the metabolite voriconazole-N-oxide [2].

Diagnosis of photo-onycholysis is essentially clinical. Treatment involves use of photo-protective agents including protective clothing, UVA blocking protective window and home films, physical and chemical sun-blocking agents and nail colors. Culprit drug can be discontinued for sometime before careful re-introduction. We could find only a single previous report describing photo-onycholysis with voriconazole [3]. In conclusion, the physicians prescribing voriconazole

should advise adequate photo-protection, especially in patients with outdoor occupation and keep a vigilant eye on the development of cutaneous toxicities.

Funding

None.

References

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