

Ischemic Onycholysis of the Hands

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Onycholysis is the distal and/or lateral separation of the nail from the nail bed. Although it can be idiopathic, there are several factors associated with the development of this condition. Ischemia is recognized as one of the possible causes, but this relationship has been poorly described in the literature. We report a case of onycholysis with a striking clinical picture and discuss the role of ischemia in the development of the lesions.

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Onycholysis is characterized by a spontaneous separation of the nail plate, usually starting at the distal free margin and progressing proximally. It is a nail disorder frequently encountered by dermatologists. Less often, separation of the nail plate begins at the proximal nail and extends to the free edge. A wide range of endogenous, exogenous, and hereditary conditions have been described in association with onycholysis, and some cases are idiopathic. Although ischemia is a possible contributing factor, reports of this association are lacking in the dermatologic literature. We describe a case of ischemic onycholysis and discuss the role of ischemia in the development of this condition.

Case Report

A 70-year-old woman with a history of ischemic cardiomyopathy and carpal tunnel syndrome was referred to our clinic with onycholysis of 6 years' duration confined to the third, fourth, and fifth

fingers of both hands (Figure 1). No improvement was achieved with hardening nail polish or protective measures. A traumatic etiology was considered, as she had been sewing for 20 years, but this hypothesis did not explain the distribution of the lesions. Suspecting an ischemic origin of the lesions, magnetic resonance angiography of both hands was performed, which showed severe and diffuse vascular impairment with predominance of blood flow in radial vessels (Figure 2). In the right hand, there were stenotic lesions in the deep palmar arch (Figure 3). Daily injection of iloprost for 1 month was proposed to the patient, but she rejected the treatment. There has been no progression of the onycholysis in the last 2 years.

Comment

Onycholysis is one of the most common nail disorders and there are many causes.¹ General medical conditions such as hypothyroidism, hyperthyroidism, hyperhidrosis, yellow nail syndrome, or shell nail syndrome are well-known causes of onycholysis. This disturbance of the nails also can be secondary to minor trauma (ie, immersion of the hands in soap or water); nail hardeners²; phototoxic drugs (photoonycholysis) such as psoralens, tetracyclines, or other antibiotics³; or antitumoral chemotherapy such as paclitaxel or capecitabine.⁴



Figure 1. Bilateral and symmetrical onycholysis confined to the third, fourth, and fifth fingers of both hands.

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The authors report no conflict of interest.

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Figure 2. Magnetic resonance angiography showed severe vascular involvement with filiform stenosis of cubital arteries and predominance of blood perfusion in radial vessels.



Figure 3. Magnetic resonance angiography showed stenotic lesions in the deep palmar arch.

Although ischemia also is a recognized etiopathogenic factor of onycholysis,¹ a PubMed search of articles indexed for MEDLINE using the terms *ischemia* and *onycholysis* did not return any results. The role of vascular hypoperfusion in the development of nail lesions in our patient seems likely because the distribution of the lesions fits with the arterial impairment shown on magnetic resonance angiography and no other factor explaining the localization of the nail disease could be identified. Stenotic involvement of the deep palmar arch in our patient blocked collateral circulation from the radial artery, explaining the low blood flow in cubital vessels. Chronic ischemia could be responsible for the abnormal nail growth with progressive separation of the nail and nail bed in our patient. Intravenous iloprost, effective in the treatment of Raynaud phenomenon secondary to scleroderma and digital ulcers,⁵ could be a useful therapeutic tool in the treatment of vascular onycholysis, especially in cases associated with other ischemic manifestations.

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