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Authors

Robledo, A
Godoy, E
Manrique, E
et al.

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Retronychia: an underdiagnosed disease

A Robledo¹, E Godoy², E Manrique¹, P Manchado¹

Affiliations: ¹Department of Dermatology, Hospital Clínico Universitario de Valladolid, Spain

²Department of Dermatology, Hospital Virgen de la Concha, Complejo Asistencial de Zamora, Spain

Corresponding Author: Aitana Robledo Sánchez, Urraca nº 8-3B, ZIP code: 47012, Valladolid, Spain, Tel: 34 645764060, Email: robledosanchezaitana@gmail.com

Abstract

Retronychia is a recently described cause of ingrowth of the nail plate on the ventral surface of the proximal nail fold. Clinical features are repeated episodes of proximal paronychia, nail plate thickening, and occasionally granulation tissue emergence. The usual treatments for paronychia such as antibiotics and antifungals are ineffective in these cases. Avulsion of the nail plate is the treatment of choice for these patients, but effective treatment is usually delayed owing to inadequate diagnosis. Herein, we describe a 28-year-old woman with a case of retronychia. She was treated for two months with oral and topical antifungal and antibiotics by her general practitioner. After proper diagnosis and avulsion of the nail she presented a normal and non-painful growth of the affected nail.

Keywords: nails; ingrown; proximal paronychia; retronychia

Introduction:

Retronychia is described as ingrowth of the nail plate on the ventral surface of the proximal nail fold (PNF). It is clinically characterized by proximal paronychia, nail plate thickening, and occasionally granulation tissue emergence. We present a new case of this probably frequent condition in order to emphasize the importance of recognizing this diagnosis.

Case Synopsis

A 28-year-old woman without any relevant antecedent history was referred to our clinic for

evaluation of a painful nail condition. She complained of nail fold inflammation, redness, and pain for the last two months. When asked about the growth of the nail, the patient indicated that the nail had not grown in the last months. She denied trauma or other triggering events. The patient had been treated previously with antifungals (clotrimazol cream and oral fluconazole) and antibiotics (mupirocin ointment, oral cloxacillin, and amoxicillin/clavulanic acid) without improvement of her symptoms.

The physical examination revealed painful paronychia of the PNF with no discharge. The nail surface was yellowish with a thickened proximal nail plate was present (Figure.1). With the clinical diagnosis of retronychia we performed an avulsion of the nail plate under regional anesthesia. After nail avulsion we confirmed the presence of a dystrophic nail plate with a proximal double fold (Figure.2).



Figure 1. Painful paronychia of the PNF.



Figure 2. Nail plate after surgical avulsion. Two layers of nail plate were found.

A month of routine wound care was completed when the patient returned for follow up. The pain and inflammation had subsided and the nail plate was growing normally. After 10 months follow up there was no recurrence.

Case Discussion

Retronychia is described as a proximal ingrowth of the nail plate into the ventral surface of the PNF. The term was first coined in 1999 by De Berker et al. [1] and the largest series of cases published so far is 20 cases [2]. Retronychia is a clinical diagnosis. The described diagnostic criteria are chronic painful inflammation of the PNF, thickening of the proximal nail plate, and granulation tissue emerging from beneath the nail fold [3]. Avulsion of the nail plate confirms the clinical diagnosis, showing two or more nail plate layers firmly attached to the nail bed, as in our case. This can be also observed histologically.

Retronychia should be differentiated from subungual tumors and cysts [2]. In doubtful cases high resolution ultrasound may help by showing a decreased distance between the origin of the nail plate and the base of the distal phalanx, thickening of the nail plate, decreased ecogenicity, and increased dermal blood flow at the posterior nail fold and proximal nail bed [5]. The pathogenesis of this condition is unknown but it is believed that it begins with a brisk insult (normally repeated micro trauma), which causes the disruption of the nail longitudinal growth. That

would explain the frequent affection of great toes. Normally, such an insult leads to onychomadesis. However, in the case of retronychia the newly formed plate grows under the old one and pushes it up. The explanation to why these nails are not just shed in a typical manner is that in retronychia the new nail is partly fixed to the former one. It remains in the nail pocket because the new nail can't progress distally, so it passes under it and pushes the old nail upwards [2]. This abnormality causes damage to the epidermis resulting in pain, inflammation, and granulation tissue [3, 6, 7].

Conclusion

It is believed that retronychia is a common but underdiagnosed nail condition. Proximal paronychia without response to treatment and thickening of the nail plate associated with a halt in nail growth should lead to consideration of a retronychia diagnosis. Avulsion of the nail plate resolves the symptoms and disease recurrence is rare. It is important for clinicians to know this disease in order to make a proper diagnosis and avoid unnecessary treatments.

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