Case report

Clinical and dermoscopic features of Winer's nodular solitary calcinosis

ABSTRACT

Aims: Winer's nodular solitary calcinosis is a rare and benign form of localized idiopathic cutaneous calcinosis for which dermoscopy may be very helpful but has never been described to our knowledge.

Case report : A 5-year-old child presented to our clinic with a 2 years history of a painless keratotic and warty nodule located in the helix of the right ear. A wart was suspected and treated without any improvement. Dermoscopy was performed and showed peripheral white deposits suggestive of Winer's calcinosis, motivating an excision whose histological examination confirmed the diagnosis.

Discussion : The subepidermal calcified nodule has been very rarely described in the literature. It is not usually associated with a disorder of phosphocalcium metabolism or other systemic diseases. Pathogenic hypotheses include calcification of preexisting skin structures, mast cell degranulation with secondary calcinosis, or prior trauma. Surgical excision with histopathological confirmation is necessary to demonstrate the dermal calcium deposits, which are usually amorphous and granular and may be surrounded by a lymphohistiocytic infiltrate or giant cells. Nevertheless, dermatoscopic evaluation can aid in rendering a timely diagnosis by showing these whitish dermal deposits.

Conclusion: The positive diagnosis of Winer's nodular calcinosis has always been based on histology, but the dermoscopy just described for the first time is so suggestive that it can be used to save time and exclude other differential diagnoses.

Keywords: Nodular calcinosis - Calcified subepidermal nodule - Winer - Child - Dermoscopy

1. INTRODUCTION

Cutaneous calcifications are characterized by dermal or hypodermal deposits of hydroxyapatite. Several types are distinguished according to the phosphocalcic balance: dystrophic, metastatic, idiopathic and iatrogenic [1]. Winer's nodular solitary calcinosis, also known as subepidermal calcified nodule, is a form of localized idiopathic cutaneous calcinosis that occurs primarily in male children on the head and neck. Surgical excision with histopathological confirmation is necessary to demonstrate the dermal deposits. Nevertheless, dermoscopy can lead to an early and easy diagnosis by demonstrating these whitish dermal deposits prior to excision.

2. PRESENTATION OF THE CASE

A 5-year-old child with no previous pathological history or any notion of trauma presented for 2 years a solitary painless keratotic and warty nodule, measuring 6 mm in length, located on the helix of the right ear (Figure 1). Dermoscopic images showed a keratinized center, whitish deposits in the periphery and some small linear vessels (Figure 2). The lesion had been treated initially as a wart, without any improvement.
After excision of the lesion, histological examination revealed an acanthosic epidermis with orthokeratotic hyperkeratosis and an amorphous dermal deposits surrounded by a scarring fibrosis with a giant foreign body-like reaction (Figure 3). The diagnosis of Winer's nodular calcinosis was established on dermoscopic and histological criteria. No recurrence has been noted to date.

3. DISCUSSION

First described by Winer in 1952, the subepidermal calcified nodule is a rare and benign form of localized idiopathic cutaneous calcinosis, without any associated disorder of phosphocalcic metabolism nor systemic disease [2]. Winer's calcinosis may be congenital or appear in early childhood with a male predominance. It presents as a firm, asymptomatic, yellow-white or erythematous tumor, preferentially located on the head and neck. Ulcerations with discharge of chalky material may occur [3]. To our knowledge, its dermoscopy has not been previously reported in the literature. The differential diagnosis can be made, among others, with a wart, a pilomatricoma, a molluscum contagiosum or a sebaceous cyst [4]. Hence the interest of dermoscopy, which can rule out these different diagnoses by revealing dermal deposits.
The pathogenesis of Winer's calcinosis is unclear. Some authors assume that it results from calcification of pre-existing skin structures such as syringomas, nevus or necrosis of subcutaneous fat. Others suggest mast cell degranulation with secondary calcinosis or even a previous trauma [5]. Histologically, dermal calcium deposits are usually amorphous and globular or granular, may be surrounded by a lymphohistiocytic or giant cell infiltrate and do not involve accessory glands [2]. Treatment with CO2 laser has been successfully reported. Nevertheless, surgical removal with anatomopathological examination remains the treatment of choice.

4. CONCLUSION

The subepidermal calcified nodule is a rare but specific subtype of idiopathic calcinosis, especially in children. Several etiological hypotheses can be raised in front of this picture but the dermoscopy can aid in rendering a timely diagnosis by showing the intradermal calcium deposits.

CONSENT

All authors declare that written informed consent was obtained from the patient (for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editorial office/Chief Editor/Editorial Board members of this journal.

ETHICAL APPROVAL

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki

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FIGURES

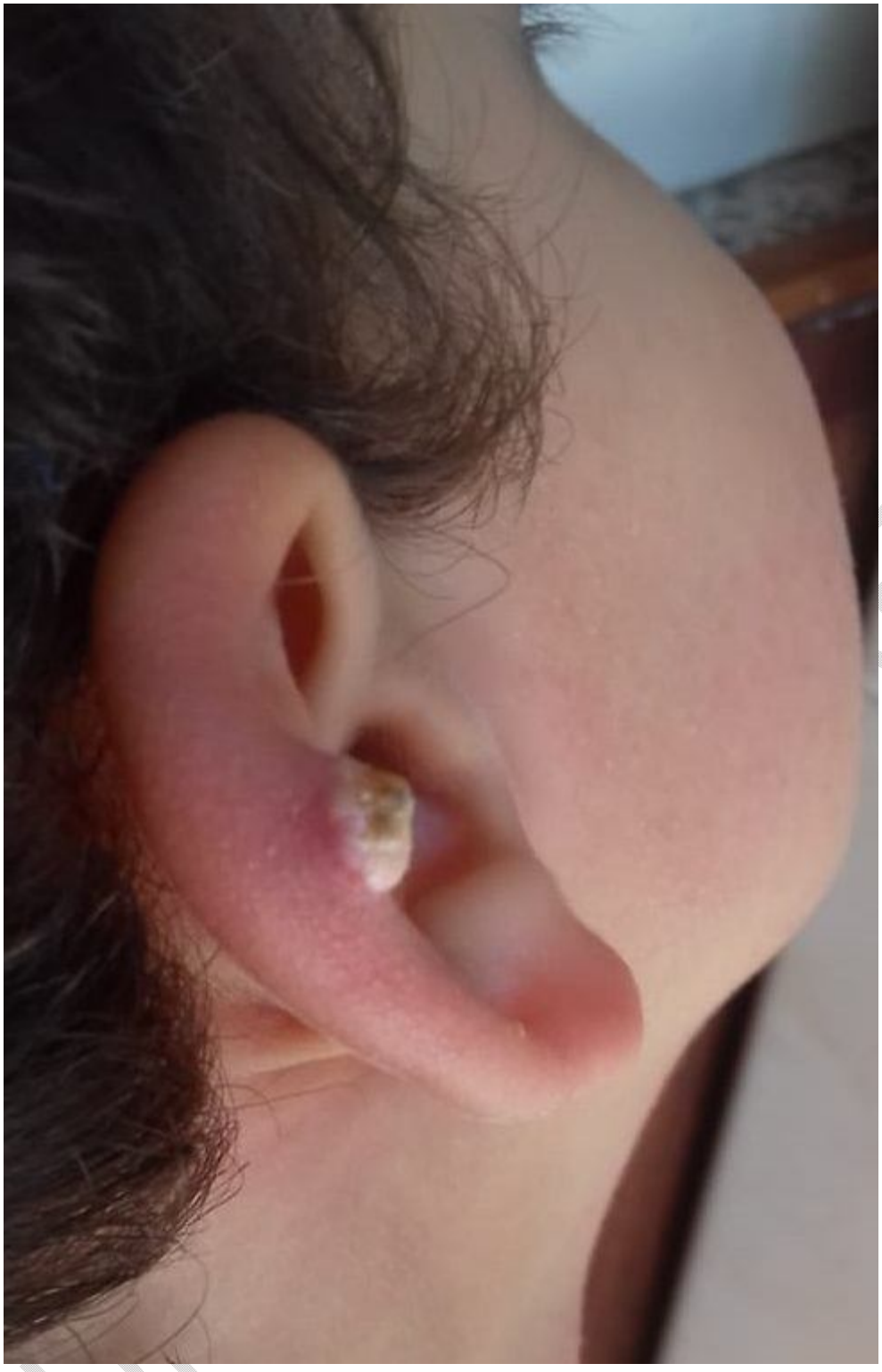

Figure 1 : Nodule with keratotic surface, firm, yellowish-white in the helix of the right ear.

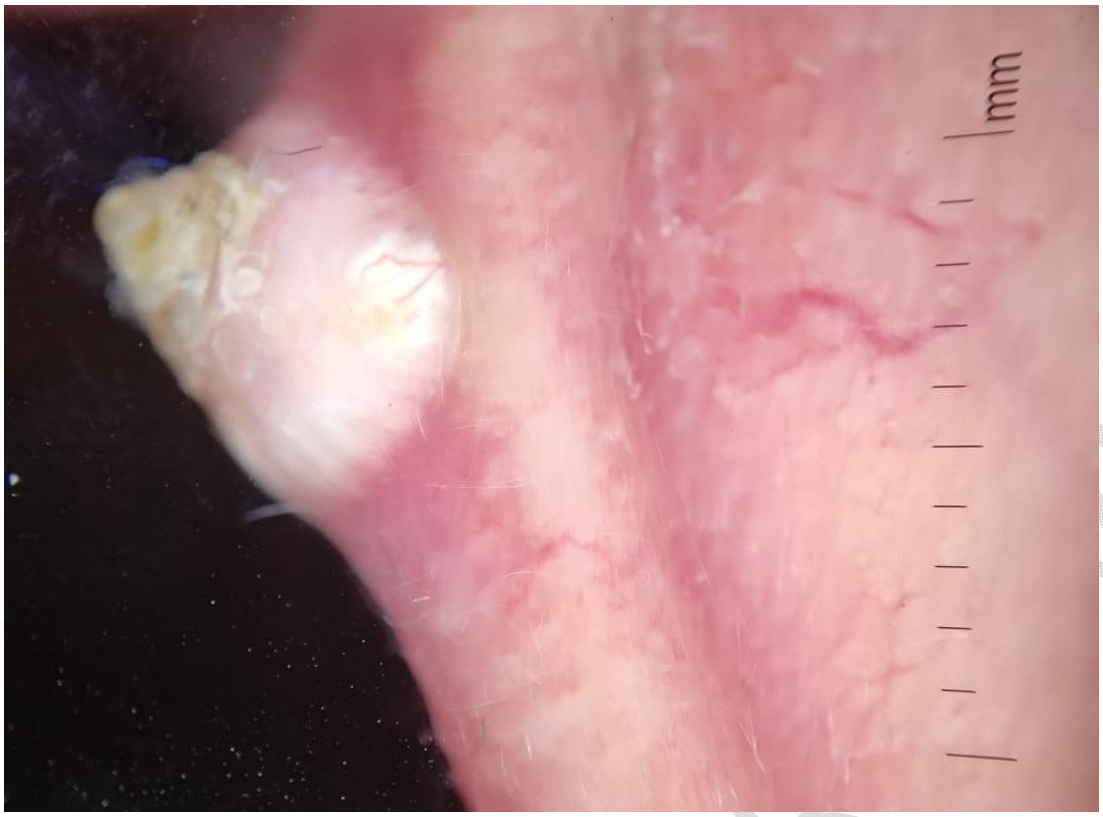

Figure 2 : Dermoscopic features including a central domed hyperkeratosis, whitish deposits in the periphery, and some small linear vessels.

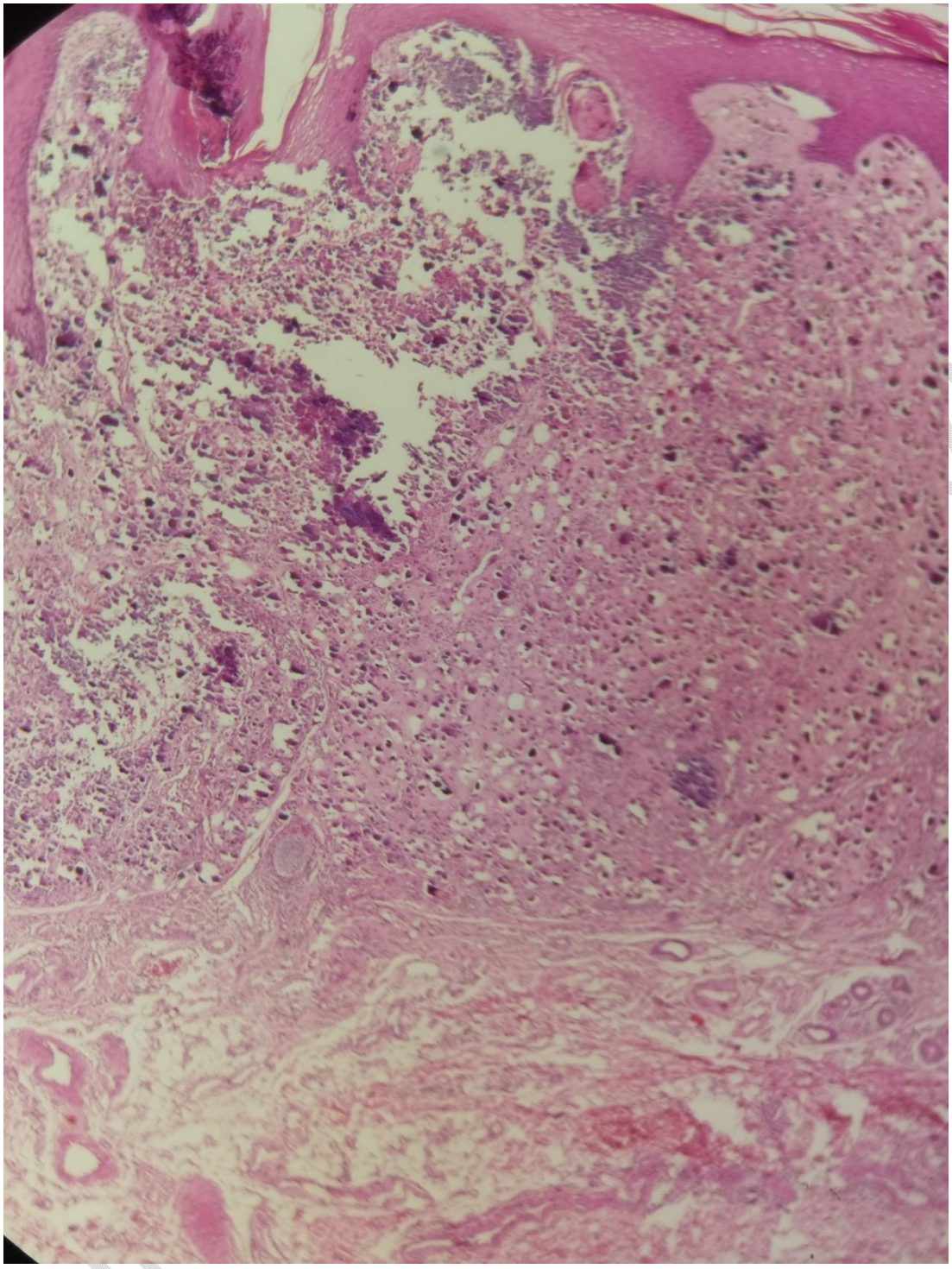

Figure 3 : Histological section showing amorphous dermal deposits, surrounded by scarring fibrosis with a giant foreign body-like reaction.