An Unusual Periungual Lesion

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Question

History

A 56-year-old female presented with a 3-month history of a painful, subungual lesion arising from the distal nail bed of the left hallux (Fig. 1). Her past medical history included sarcoidosis, for which she was receiving treatment with oral prednisolone. On examination she had a firm, hyperkeratotic lesion, which was approximately 6 mm in diameter underneath the left great toenail (Fig. 2).

Histopathology

Histological examination of the excised lesion revealed a polypoid lesion covered by parakeratotic, hyperkeratotic, crusted, and acanthotic epidermis. This was associated with a tumour composed of branching islands and cords of monomorphic basaloid cells that showed multiple points of origin from the epidermis; duct-like spaces were apparent within these (Fig. 3, 4).

What is your diagnosis?

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Fig. 1. A medical photograph showing a subungual lesion arising from the distal nail bed of the left hallux.

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Fig. 2. The nail has been partially avulsed, revealing a hyperkeratotic papule.

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Fig. 3. A polypoid skin lesion containing a dermal tumour composed of branching and anastomosing islands and cords of bland cells with multiple points of origin from the basal epidermis. HE. $\times 20$.

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Fig. 4. High-power view showing monomorphic, polygonal cells with focal duct differentiation. HE. $\times 600$.

Answer

Subungual eccrine poroma

The lesion was visualised with a partial nail avulsion and then excised with a narrow margin. Histological examination showed an incompletely excised eccrine poroma. The patient then underwent a wider excision, which showed no residual poroma. The defect healed well by secondary intention. To date there has been no recurrence.

Eccrine poroma was first reported by Goldman et al. [1] in 1956. There appears to be no sexual or racial predilection, and eccrine poroma commonly affects adults over the age of 40 years [2].

The eccrine sweat gland consists of an intraepidermal spiral duct known as the acrosyringium, a dermal duct which is composed of a straight and coiled portion and a secretory portion in the deep dermis [3]. An eccrine poroma is a benign tumour thought to arise from the acrosyringium, which is the most superficial portion of the eccrine duct. Eccrine glands are concentrated on the palms and soles, which is why the majority of lesions occur in these areas [4]. Eccrine poroma normally presents as a slow-growing, solitary, exophytic, pink papule or nodule [2].

Histologically the features of an eccrine poroma are a monomorphic proliferation of poroid and cuticular cells, with ductular differentiation and multiple points of epidermal origin [5]. Its aetiology is unknown; however, it is postulated that the following may be causative factors: solar damage, radiation exposure, trauma, and human papilloma virus [6].

The nail bed itself does not have eccrine sweat glands; however, they are found in the proximal and lateral nail

folds and fingertips. This implies that the tumour originates from these structures and extends to the nail bed. Our case is unusual because, clinically, the lesion appeared to arise from the nail bed. Nail-related eccrine poromas are rare; there are only 7 publications reported in the literature: 2 cases were periungual [7, 8], 3 were affecting the nail fold [9–11], 1 was subungual [12], and 1 was affecting the hyponychium and the lateral nail fold [13].

Differential diagnoses include eccrine porocarcinoma, eccrine spiradenoma, myofibroma, neuroma, malignant melanoma, squamous cell carcinoma, or Bowen disease.

Treatment includes full excision to prevent recurrence. There are case reports of periungual porocarcinoma, which is a rare malignant cutaneous tumour. A case series of 62 patients with eccrine porocarcinoma found that 11 cases arose from a pre-existing eccrine poroma [14].

Statement of Ethics

The patient gave her consent to publication. There are no ethical considerations.

Disclosure Statement

The authors declare no conflict of interest.

Keywords

Nail disease · Nail disorders · Nail cosmetics

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