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## Eccrine Poroma Clinically Mimicking Ingrowing Toenail Complicated with Granulation Tissue

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Dear Editor:

Eccrine poroma is a benign tumor arising from the eccrine gland epithelium in the epidermis. It can occur anywhere in the body, where eccrine gland exists. Here, we report a case of eccrine poroma mimicking an ingrowing toenail complicated with granulation tissue, as this case can easily lead physicians to misdiagnosis.

A previously healthy 55-year-old man was presented with one month of solitary painful erythematous papule on margin of his first left-foot toenail. His past medical history was unremarkable.

On physical examination, we found a well-defined erythematous papule (0.5 cm in diameter) over the medial side of the left first toenail margin (Fig. 1). First impression was the granulation tissue caused by an adjacent ingrowing toenail. A shaving excision was performed.

Unexpectedly, histological examination confirmed eccrine poroma (Fig. 2). After three months, a new lesion recurred, and surgical excision had to be done for complete removal.

Eccrine poroma is a tumor arising from the eccrine duct epithelium in the epidermis, called acrosyringium. The majority of lesions occur on the palms and soles, as eccrine glands are concentrated in those areas. Eccrine

poroma appears as an exophytic, skin colored or pink papule with a diameter of 1~2 cm. It is easily diagnosed based on typical clinical manifestations. As longstanding lesions can develop into malignant eccrine poromas, surgical removal is the primary treatment option.

Onychocryptosis, or ingrowing toenail, is a common nail disorder where the side of the nail plate penetrates the

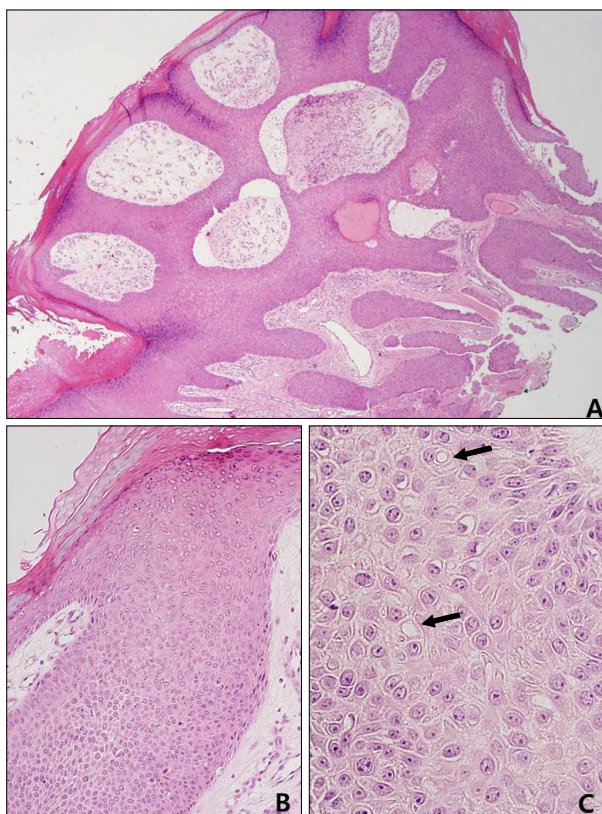


**Fig. 1.** Solitary well-defined erythematous papule (measured 0.5×0.5 cm in diameter) on the lateral fold of left first toenail.

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**Fig. 2.** (A) Tumor consists of anastomosing bands radiating from the epidermis (H&E,  $\times 100$ ). (B) Tumor cells were found under the epidermis (H&E,  $\times 200$ ). (C) Cells have a uniformly small cuboidal appearance and connected by intercellular bridges with several intracytoplasmic lumina (denoted by arrows) (H&E,  $\times 400$ ).

adjacent soft tissues, resulting in pain, infection and formation of granulation tissue. It is frequently observed between the ages of 15 and 40 years, with a male predominance of 3:1<sup>1</sup>. Treatment is removal of the nail matrix, and phenolization of the nail matrix is considered to be the best option for low recurrences<sup>2</sup>. If onychocryptosis persists, pyogenic granuloma can develop, where systemic antibiotic treatment and cauterization of pyogenic granuloma should be considered.

In this case, there were several factors that can lead to misdiagnosis. Firstly, the protruding papule looked very similar to the granulation tissue caused by ingrowing

toenails. Secondly, eccrine poroma is rarely observed on the dorsum of the hands and feet<sup>3</sup>. Lastly, as the patient had ingrowing toenails previously, most physicians would have diagnosed the lesion as an ingrowing toenail complicated by granulation tissue. If not biopsied, the lesion could have been diagnosed as an ingrowing toenail, and it would have recurrently developed, even after an operative procedure of the ingrowing toenail was done. Tumors of the nail fold have been described; porocarcinoma, eccrine spiradenoma, myofibroma, neuroma and amelanotic melanoma. Among those, malignant porocarcinoma of the nail fold<sup>4</sup> and amelanotic melanoma masquerading as ingrowing toenails<sup>5</sup> have been reported to be similar to this case.

Although eccrine poroma on the feet is not unusual, the location of the lesion and the onset following ingrowing toenails might have led physicians into misdiagnosis as the granulation tissue of ingrowing toenail. Therefore, we report this case to emphasize the importance of biopsy of the skin lesions mimicking ingrowing toenails complicated by granulation tissue, even in the absence of atypical features.

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