Subungual exostosis with an unusual dermoscopic feature

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INTRODUCTION

First described by Dupuytren in 1874, subungual exostosis is a benign osteocartilaginous tumor attached to the bone of the distal phalanx.[1] Most commonly, subungual exostosis arises within the great toe of young individuals.[2,3] The nail plate is elevated due to a firm subungual nodule produced by an exostosis. Dermoscopic features of the affected nail include vascular ectasia, hyperkeratosis, onycholysis, and ulceration, with vascular ectasia being the most common finding.[4] However, the dermoscopic pattern of red coral vascular ectasia is extremely rare. To our knowledge, this pattern has thus far not been reported.

CASE REPORT

A 44-year-old woman presented with a mildly painful nodule on the lateral edge of the left fifth toe and destruction of the nail plate for 1 year. Two months prior, she was treated for a wart with a topical salicylic acid agent but with little effect. She denied paronychial infection or toe inflammation. Her medical and family history was unremarkable. Physical examination found a light red, firm nodule, measuring around 5 mm × 7 mm located on the lateral aspect of the left little toe, along with the destruction of the nail plate (Fig 1, *A*). Dermoscopy of the lesion's surface found a white patch, vascular ectasia, and hyperkeratosis on the anterior aspect of the lesion (Fig 1, *B* and *C*). A biopsy of the lesion was performed. Histopathologic examination found trabecular bone with a cap of fibrocartilaginous tissue (Fig 1, *D*), characteristic of subungual exostosis.

DISCUSSION

Subungual exostosis is a relatively rare, benign osteocartilaginous tumor attached to the bone of the distal phalanx, which was first described by Dupuytren in 1874.[1] It occurs most commonly in children and young adults, with a female/male ratio of 2:1, and often affects the great toe.[2,3] Individuals at increased risk for subungual exostosis include those with trauma, chronic infection, tumor, hereditary anomalies, and the activation of a cartilaginous cyst, although its etiology and pathogenesis are not clearly established.[1] Its clinical manifestations are asymptomatic or painful subungual nodules. Elevation and destruction on the nail plate in the affected area is a common feature. On histology, the mature trabecular bone covered by a fibrocartilaginous cap is a characteristic histopathologic finding of subungual exostosis.[1,2]

A definite diagnosis of subungual exostosis is often possible only after histopathologic examination. Although radiography can assist the diagnosis of subungual exostosis,[1] early lesions may have insufficient bone formation to show up on radiographic examination. Dermoscopy is a noninvasive diagnostic technique increasingly used for the early diagnosis and differential diagnosis of nail diseases. For instance, subungual exostosis can be easily misdiagnosed as viral wart resulting in unnecessary and unsatisfactory treatments in clinical practice. The dermoscopic findings of viral wart are characterized by typical rough surface and hemorrhagic dotted vessels.[5] However, dermoscopic features of subungual exostosis include vascular ectasia, hyperkeratosis, onycholysis, and

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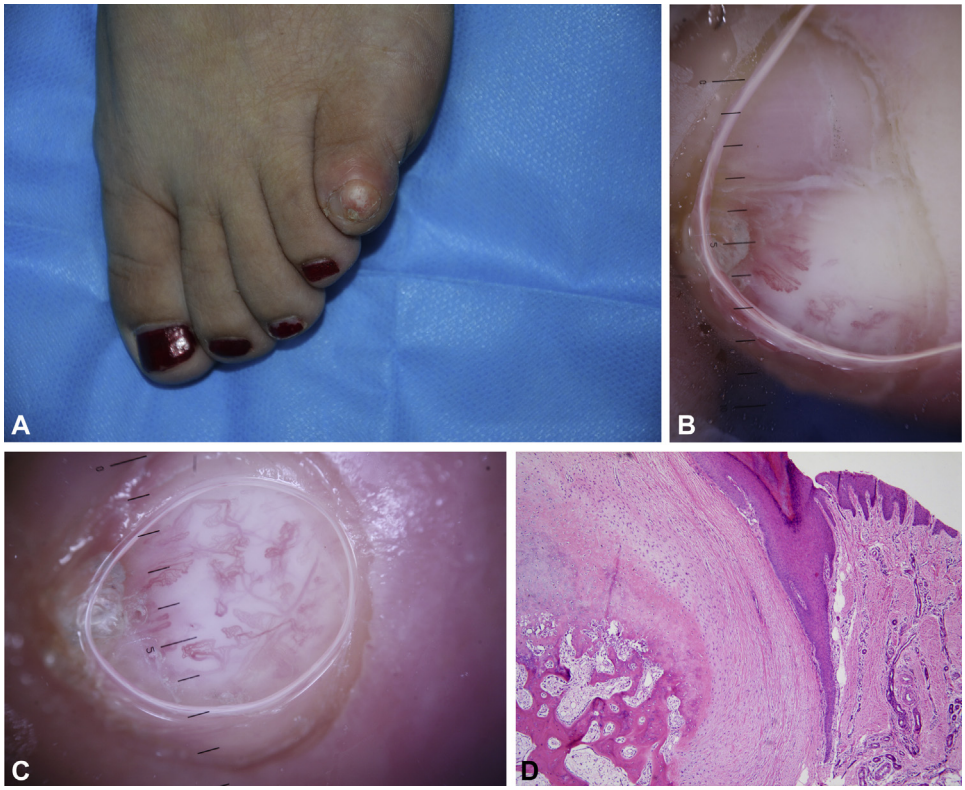

Fig 1. A, Clinical appearance of subungual exostosis with a firm nodule, measuring 7 mm in diameter, on the lateral edge of the left fifth toe, and destruction of nail plate. **B** and **C,** Dermoscopy of the lesion surface shows the abundant and tortuous vascular ectasia reminiscent red corals. **D,** Histologic findings. A mature trabecular pattern of a cancellous bone base with a proliferating fibrocartilaginous cap. (Hematoxylin-eosin stain; original magnification ×40.)

ulceration, with vascular ectasia being the most common finding.[4] In this case, dermoscopy of the lesion's surface found a white patch, vascular ectasia, and hyperkeratosis on the anterior aspect of the lesion. The tortuous and dilated vessels were reminiscent of red coral with tentacle-like arms dancing in the sea. The unusual vascular ectasia pattern like red coral is rare and is different from the common dermoscopic feature of vascular in subungual exostosis.[4]

Surgical excision is the main treatment, which is effective and well-tolerated option.[1] In this patient, no clinical problems were detected after 6 months of follow-up.

To our knowledge, the dermoscopic pattern of red coral vascular ectasia in subungual exostosis is the first case in the medical literature reporting. Therefore, "red coral" vascular ectasia should be included in technical terms of dermoscopic pattern.

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