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Figure 1. Right great toe lesion.



Figure 2. Radiograph of the right foot. Used with permission from Peter A. Lio, MD, Department of Dermatology, Northwestern University, Chicago, IL.

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A 12-year-old healthy boy was evaluated for a growth under his right great toenail (Figure 1). The lesion was initially diagnosed as a subungual verruca and treated for 4 months with topical salicylic acid and cryotherapy. No improvement was observed, and the growth continued to enlarge and became increasingly painful. Radiographs of the right foot demonstrated an osseous protuberance at the distal phalanx (Figure 2).

*For the diagnosis and teaching points, see page e4.
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DIAGNOSIS:

Subungual exostosis. Subungual exostosis is a benign cartilaginous bone tumor of the distal phalanx, occurring as a solitary lesion of the great toe in children and young adults. The pathogenesis and cause remain unknown, but fibrocartilaginous metaplasia with endochondral ossification from microtrauma or chronic infection has been implicated.¹ The subungual mass develops slowly over months and may cause detachment of the overlying nail. The exposed nailbed surface or surrounding tissue may further ulcerate and become infected, leading to nail deformity and pain in the digit.²

Subungual exostosis is often unrecognized or misdiagnosed because it can appear similar to a number of nail, soft tissue, and bony pathologies, including subungual verruca, onychomycosis, fibroma, pyogenic granuloma, keratoacanthoma, glomus tumor, myositis ossificans, and melanoma.³ Diagnosis is made without the need for biopsy through radiographs that show a sessile or pedunculated expansion of trabecular bone covered in radiolucent cartilage, with no evidence of cortical disruption or any abnormality of the distal phalanx.⁴ Treatment with surgical excision is frequently curative, with limited recurrence when adequate curettage of the base is performed.⁵

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