Painful Callus of the Thumb Due to Phalangeal Exostosis

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A 26-year-old white man had a painful callus of the lateral area of the right thumb, which was associated with a phalangeal exostosis. This rarely reported entity on the hand probably represents an osteocartilaginous outgrowth from the underlying bone.

Exostosis of a finger is a rarely reported entity,\(^1,2\) which is usually subungual in location. We wish to report an unusual case in which such an exostosis occurred over the lateral distal phalanx of the right thumb.

Report of a Case

A 26-year-old white man had a painful, erythematous area of thickened skin over the left lateral thumb. Pain on pressure was a prominent symptom. The lesion had been present for approximately one year, and during the month preceding examination of the patient, it had become ulcerated. Curettage revealed bone immediately beneath the lesion (Fig 1). X-ray films showed a cauliflower-like mass of trabecular bone extending laterally from the distal phalanx of the thumb (Fig 2). The lesion was curetted off the underlying bone. Microscopic examination revealed a thickened epidermis with inflamed fibrous tissue in which one could see new bone formation (Fig 3). Postoperatively, the lesion healed readily and there was no recurrence at six months.

Comment

A solitary exostosis occurring on a finger is a rarely reported entity.\(^1,2\) As mentioned previously, most of the reported cases are subungual in location. Furthermore, standard textbooks\(^3-6\) of bone tumors scarcely make mention of this entity and emphasize that the usual location is on the foot.

Persistent changes in the skin of a finger without obvious cause should arouse one's suspicion that an underlying bony lesion is present. In a series of 30 patients with persistent subungual or perungual cutaneous inflammation, reported by Pambor and Neubert,

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\(^1\) A. A. Neubert, J. Dermal. 1910, 4, 14, 1913.
\(^2\) H. Neubert, J. Dermal. 1910, 4, 14, 1913.
\(^3\) D. A. Neubert, J. Dermal. 1910, 4, 14, 1913.
\(^4\) D. A. Neubert, J. Dermal. 1910, 4, 14, 1913.
\(^5\) D. A. Neubert, J. Dermal. 1910, 4, 14, 1913.
\(^6\) D. A. Neubert, J. Dermal. 1910, 4, 14, 1913.

Fig 1.—Radial area of left thumb. Note underlying bone subsequent to curettage and location of lesion (without involvement of nail).

Fig 2.—Exostosis of left radial distal first phalanx of thumb.
bones. It is important to establish whether the lesion represents such an entity, for the cartilage cap may undergo sarcomatous degeneration, and in a rapidly expanding lesion this should be a prime consideration. Radiologically, other entities to be considered in the differential diagnosis are myositis ossificans, juxtacortical chondroma, and traumatic exostosis.

We think this case represents an osteochondroma. Most of the patients are young adults or children. The older the patient, the less likely one will find the cartilaginous cap, for this tends to involute and disappear with age. The radiological appearance may be either a sessile or stalked base with a hemispheric, cauliflower-like, or knobby surface. Trabeculated bone is noted, as in our case. Myositis ossificans usually lies in fascial planes, tends to be a more uniform calcium density, and usually is not attached to underlying bone. Surgery is curative if the total lesion is removed.

In summary, a solitary exostosis of a finger is extremely unusual, but should be suspected whenever a patient has a persistently painful callus or ulceration on a digit and there is no obvious cause for the abnormality. Although such lesions are generally subungual in location, our case clearly demonstrates that they may be periungual as well, with minimal or no involvement of the nail itself. Exostoses of the hand are usually osteochondromas, which are benign tumors. The skin lesions, of course, can only be permanently cured by definitive surgery of the underlying bony lesion.

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References

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4. Pambor VM, Neubert H: Tumorartige Be-
gleiterkrankungen der Haut bei Exostosen der Ze-

Test Your Knowledge

Answer — a; Powell JA, Duell EA, Voorhees JJ: Beta adrenergic stimulation of endogenous epidermal cyclic AMP formation. Arch Dermatol 104:359-365, 1971. (For question, see page 800.)