Subungual Nodule of the Great Toe in Female Child

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Introduction
Subungual exostoses are bony projections which arise from the dorsal surface of the distal phalanx, most commonly of the hallux [1], often disturbing the nail plate and causing pain. We report case of subungual exostosis in a female child of 10 years who presented since one year a fixed firm nodule of the great toe. Clinically, radiologic and histological finding were compatible with subungual exostosis. The treatment is surgical. Early diagnosis avoids nail dystrophy.

Keywords: Subungual Exostosis; Nodule; Great Toe; Surgery.

Abstract
Subungual exostoses are bony projections which arise from the dorsal surface of the distal phalanx, most commonly of the hallux, often disturbing the nail plate and causing pain. We report case of subungual exostosis in a female child.

Discussion
Subungual exostosis is an uncommon, slow growing, benign osteocartilaginous tumour arising from the distal phalanx of a digit, beneath or adjacent to the nail bed. Dupuytren first described the condition in 1817 [2, 3] clinically it appears as painful red-pink expanding nodule under the great toenail. The majority of the lesions occur in the second or third decade of life which is the case of our patient [4]. Fikri reported 28 observations in 14 years [5]. Landon reported 44 observations in 65 years [6]. Subungual exostosis more commonly affects women than men in a ratio of 2:1 [7]. Differential diagnoses include subungual verruc, squamous cell carcinoma, onychocryptosis, inclusion cysts, glomus tumor, malignant melanoma [8], Ingrown toenail, Pyogenic granuloma, and Osteochondroma.

Radiologic imaging of Subungual exostosis reveals an osteocartilaginous exophytic mass extending from the distal tuft of the phalanx. Histology showed mature trabecular bone with a proliferating fibrocartilaginous [4].

Various surgical techniques are performed, depending on the extent of nail bed involvement. A fish mouth incision is made where the lesion does not destroy the nail bed. This type of incision raises the nail to excise the tumor, leaving the nail bed intact. Where the lesion is large and the nail bed is destroyed, the nail is removed.
and the tumor approached directly from above. In this case, the nail bed is preserved as much as possible [9]. The most common complications associated with the excision of a subungual exostosis are recurrence, infection, nail plate growth disturbances, and subungual hematoma.

The etiology of subungual exostosis is unknown. The presence of a subungual exostosis is usually interpreted as a reactive process rather than as a neoplastic one. It has been described as an acquired deformity in which trauma and microtrauma seem to be the most important etiologic factors [10]. Others authors have hypothesized their growth is related to chronic infection. Starnes reported a genetic correlation in a small number of patients [11]. In an analysis of the histology of subungual exostosis, Ippolito reported that growth could occur via two different mechanisms: enchondral ossification, or more commonly, intramembranous/
mixed ossification [12].

Conclusion

The diagnosis of subungual exostosis is easy; it may be suspected from the clinical presentation and confirmed with radiographic examination. Subungual exostosis should be considered in the differential diagnosis of any digital mass.

References

[1]. Rapini RP, Bolognia JL, Jorizzo JL (2007) Dermatology. (2nd edn) St. Louis: Mosby.
[2]. Dave S, Carunanaidy U, Thappa DM, Jayanthi S (2004) Subungual exostosis of the thumb. Dermatol Online J 10(1): 15.
[3]. Singh R, Jain M, Goel R, Siwach R, Kalra R et al., (2011) Subungual exostosis of the great toe: a case report and tumor overview. Foot Ankle Spec 4(6): 376–378.
[4]. Letts M, Davidson D, Nizalik E (1998) Subungual exostosis: diagnosis and treatment in children. J Trauma 44(2): 346-349.
[5]. Fikry T, Dkhissi M, Harfaoui A, Adil A, Haddoun A et al., (1998) Subungual exostoses. A retrospective study of a series of 28 cases. Acta Orthop Belg 64(1): 35-40.
[6]. Landon G, Johnson KÅ, Dahlin D (1979) Subungual exostosis. J Bone Joint Surg 61: 256-259.
[7]. Davis DA, Cohen PR (1996) Subungual exostotic case report and review of the literature Pediatr Dermatol 13(3): 212-218.
[8]. Carroll RE, Chance JT, Inan Y (1992) Subungual exostosis in the hand. J Hand Surg Br 17: 569-574.
[9]. Lokiec F, Ezra E, Krasin E, Keret D, Wientrob S (2001) A simple and efficient surgical technique for subungual exostosis. J Pediatr Orthop 21(1): 76-79.
[10]. Griaill PI, Lombardi CM, Sciarriino AL, Rainer GF, Buffone WF (1989) Three select subungual pathologies: subungual exostosis, subungual osteochondroma and subungual hematoma. Clin Pediatr Med Surg 6(2): 355-364.
[11]. Starnes A, Kara Crosby DO, Rowe DJ, Jeremy S (2012) Subungual exostosis: A simple surgical technique. Dermatol Surg 38(2):258–260.
[12]. Ippolito E, Falez F, Tudisco C, Balus L, Fazio M et al., (1987) Subungual exostosis. Histological and clinical considerations on 30 cases. Ital J Orthop Traumatol 13(1): 81–87.