Case report

Subungual Exostosis In A Thumb: A Rare Case Report In A Child

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Abstract

Subungual exostosis is a benign osteocartilaginous tumor that mostly occurs in female gender. In present article, we aimed to describe a child (male) which was suffering from rarely subungual exostosis in a toe. A 12 years old boy presented with painful 1□2cm nodule since 6 month ago. Radiography (see figure 2) demonstrated a bony lesion with a broad-based contiguous cortex. The lesion surgically excised and the "Subungual Exostosis" confirmed histologically. According to next follow up, patient did not mention any recurrences.

Key words: Subungual, Exostosis, Thumb, Child, Case Report

Introduction

Subungual exostosis is a benign osteocartilaginous tumor that first described by Dupuytren in 1817 [1]. This lesion is not a true exostosis, but an outgrowth of normal bone tissue [2]. This benign lesion has also been reported as part of multiple hereditary exostoses[3]. It occurs mostly in children and young adults and often, nearly 80% affects the great toe [4]. Also based on studies, it's rarely occurs in male gender [5]. The most common clinical presentation of this disease were severe pain, erythema, onychocryptosis and deformity of the nail bed [2]. Also the most common treatment way is surgical excision which typically alleviates the symptoms [6.[

In present article, we aimed to describe a child which was suffering from rarely subungual exostosis in a toe.

Case presentation

A 12 years old boy presented with painful 1□2cm nodule since 6 month ago (figure 1). The physical examination revealed that lesion was tender under pressure and the child was feeling pain while walking. About 1 year ago he mentioned a direct trauma to this site in a football match. At first, this

nodule was treated as a “Wart” with “Salicylic Acid” that led to irritation and bleeding outcomes. There was no family history of similar lesion. This slow growing nodule was on the distal medial aspect of his left first toe nail.

Radiography (figure 2) demonstrated a bony lesion with a broad-based contiguous cortex. The lesion surgically excised and the “Subungual Exostosis” confirmed histologically. After that, the histopathological finding did not demonstrate any evidence of malignancy. According to next follow up, patient did not mention any recurrences Discussion

Subungual Exostosis is a uncommon benign bone tumor that it is considered to be a rare variant of osteochondroma[7]. The tumor can occurs in any age, but 50% occur by 20 years of age [5]. Based on previous studies, most of patients with this lesion are female *[8] but in present article, the patient was male.

The pathogenesis of such exostosis is not clearly understood. However the following agents have been suggested: trauma, teratologic abnormality and cartilaginous [9]. Same in our case, trauma is often a precipitating factor and subungual exostosis may represent cartilaginous metaplasia *[8]. Subungual exostosis has less prevalence than its differential diagnosis includes verruca, pyogenic granuloma, glomus tumor, carcinoma of nail bed, subungual epidermal inclusion cyst, melanotic whitlow and enchondroma[10]. Therefore, the most applicable paraclinic tool to prevent from misdiagnosis is radiological study.

Multiple surgical techniques have been reported for treatment of subungualexostosis[11]. But in line to our treatment strategy, their common basis is a balance between complete lesional excision and delicate separation from underlying nail bed [12].The reported subject was improved and discharged from the hospital after a day of receiving the above-mentioned medications.

Ethical considerations

The written consent form was obtained from the patient and his family. It was confirmed that the personal data were de-identified. Moreover, they were ensured that participation was voluntary.

Clinical message:

Subungual exostosis has less prevalence than its differential diagnosis includes verruca, pyogenic granuloma, glomus tumor, carcinoma of nail bed, subungual epidermal inclusion cyst, melanotic whitlow and enchondroma[10]. Therefore, the most applicable paraclinic tool to prevent from misdiagnosis is radiological study.

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Figure1. The 12 years old boy with subungual exostosis before and after surgical excision

Figure2.Radiography of the 12 years old boy with subungual exostosis