Soft tissue chondromyxoid fibroma. An extremely rare case

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Abstract— Chondromyxoid fibroma is a rare benign bone tumor that accounts for less than 1% of primary bone tumors. The soft tissue variant of this tumor is extremely rare. Herein, we present a case of soft-tissue chondromyxoid fibroma in the foot of a 13-year-old boy treated with surgical excision.

Keywords— soft tissue chondromyxoid fibroma, surgical treatment.

1 Introduction

Chondromyxoid fibroma (HMF) is a rare benign tumor affecting the bones of the upper and lower extremities and is especially rarely localized in the hand and feet. HMF is mainly observed in children and young people between the ages of 10 and 30 and represents less than 1% of all bone tumors[2]. It was first described by Jaffe and Lichtenstein[3] in 1948. The etiology of HMF is unclear, and it is presented by pain, swelling, tension in the area, stiffness and difficulty in movement in the adjacent joints[2].

Imaging studies include radiographic examination and computed tomography, and in some cases when an extraosseous soft tissue component exists, MRI is also used. To clarify the diagnosis, a puncture biopsy is also recommended[2].

Operative treatment is the gold standard for HMF localized in the bone and includes the following procedures: thorough intralesional curettage with intraoperative use of various adjuvant techniques, such as: a) cryotherapy with liquid nitrogen; b) chemical treatment with phenol; and c) cauterization to remove microscopic tumor cells[2,4]. Filling of the cavity after curettage can be performed with auto or allografts or various synthetic bone substitutes[1].

In 10 to 23% of operated patients with HMF of bone, recurrence occurs within the first 2 years of treatment[2].

Herein, we present a case of a 13-year-old boy operated on for a soft-tissue HMF on the plantar surface in the area of the first metatarsophalangeal joint of the left foot.

2. Case report

We present a clinical case of a 13-year-old boy who came to the clinic 4 months prior with complaints of a moderately painful soft tissue formation the size of a hazelnut, located on the plantar surface of the left foot in the area of the first metatarsophalangeal joint, that appeared approximately one year prior.

From the radiographs, no evidence of bony involvement was found (Figure 1), and there were no limitations in the movements of the adjacent joints. An en bloc excision of the tumour was performed (Figure 2). It was encapsulated (Figure 3) with a hard-elastic consistency. Histological diagnosis presented soft tissue HMF. Four months later, there was no clinical evidence of recurrence.

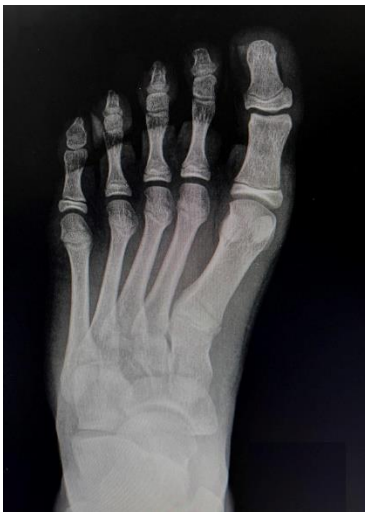

Figure 1. Preoperative roentgenography

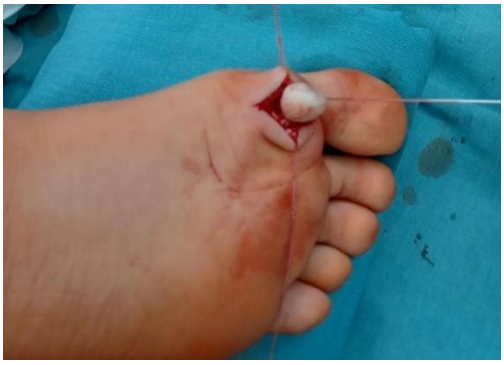

Figure 2. Intraoperative photography

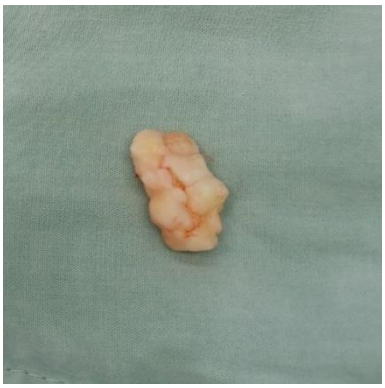

Figure 3. Macroscopic appearance of the tumour

3. Discussion

In the available literature, we found a single publication with a case report of soft tissue HMF removal by Kim et al.[5].

Macdonald et al.[6] reported a case of HMF in the acromion with expansion into the surrounding tissues.

It should be emphasized that everything described in etiological, morphological and clinical aspects about bone HMF applies completely to soft-tissue HMF. It is assumed that clinical symptoms in soft-tissue HMF are less pronounced. From a diagnostic point of view, the most valuable research is MRI, and in addition, ultrasound could be performed. The differential diagnosis can be made with benign tumors of a denser consistency, most often fibroma[2].

The extreme rarity of soft-tissue HMF does not allow for a more in-depth discussion.

4. Conclusion

Soft tissue HMF is a rare benign tumor, and localization in the area of the foot is extremely rare. Radical surgical excision is the gold standard of treatment and must be carefully performed to avoid potential recurrence.

5. References

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