Available online at www.elixirpublishers.com (Elixir International Journal)

Orthopedics

Elixir Orthopedics 67 (2014) 21574-21575

ISSN: 2229-712X

Osteoid osteoma of the phalanx: a rare localization of a case and review of the literature

H.Ait Benali, A.Rouhi, M.Boufettal, M.Kharmaz, MO.Lamrani, F. Ismael, A.El Bardouni, M.Mahfoud, MS.Berrada and M.El Yaacoubi

Department of Orthopedic Surgery, Ibn Sina university Hospital, Rabat.

ARTICLE INFO

Article history:

Received: 8 December 2013;

Received in revised form:

24 January 2014;

Accepted: 8 February 2014;

Keywords

Osteoid osteoma,

Diagnose,

Phalanx,

Paraclinical.

ABSTRACT

Osteoid osteoma is a benign osseous tumor of unknown origin, which affects preferentially the long bones. The localization in the phalanx is unusual and difficult to diagnose. We present a case of a twenty-year-old student, presenting with a painful swelling of the first phalanx of the right second finger of six months duration, not responding to anti-inflammatory drugs. The lesion was excised, and the histology confirmed the diagnosis of osteoid osteoma. Through our observation and after a review of the literature, we analyze the clinical and paraclinical appearance of this uncommon localization, the differential diagnosis, and finally the therapeutic possibilities.

Introduction

Osteoid osteoma is a benign tumor most common bone histogenesis (10% of all benign tumors) [1]. It is a tumor that is preferentially in the long bones (75% of the sites), such as the femur and tibia [2,3].

The phalangeal localization is rare, it represents only 3.8 to 5.4% of cases [3,4]. the radiological assessment often claimed diagnosis.

We report a case of osteoid osteoma of the phalanx in a young patient of 20 years who posed a diagnostic problem.

Case report :

He is a 20 years old patient, student, who handed this for six months following a sports accident (handball) swelling of the right index finger associated with pain insomniantes night upsurge. The pain was intermittent and slightly improved by taking analgesics and NSAIDs.

The patient was seen in two GPs prescription of NSAIDs and immobilization of the index with no improvement in symptoms.

Clinical examination revealed a painful swelling of the proximal phalanx of the right index finger (Figure 3) with limitation of flexion at the proximal interphalangeal joint. The overlying skin was normal. Plain radiographs showed a thickening of the cortex of the proximal phalanx with a diaphyseal sclerosis associated with peripheral osteolysis and periosteal thickening. An image of fracture is also visible. (Figure 1)

Inflammatory balance (ESR and CRP) and the intradermal mm 3 were negative.

Before the radio-clinical MRI was requested and revealed the presence of cortical thickening in which an incomplete picture surrounded by multiple small image and hypointense T1 and T2 exist. There is also an important bone edema involving the entire phalanx and adjacent soft tissues. (Figure 2)

All radiological images were in favor of an osteoid osteoma, the appearance was confirmed by a CT scan in addition to the pseudo fracture was enlarged nutrient canal compatible with the diagnosis.

The patient underwent surgical treatment under local anesthesia. A first lateral ulnar-lane right index finger, we conducted a recess of the tumor Bicortical reddish then filling with a bone graft taken at the dorsum of the ipsilateral distal radius (Figure 3). Syndactilisation with a splint was put in place. The pathological findings confirmed the diagnosis.

The outcome was spectacular with pain relief and recovery of mobility of the finger with a drop of 12 months.

Discussion

Osteoid osteoma (oo) is a benign bone tumor, described by Jaffe in 1935, it is characterized by its particular pain symptoms and limited growth potential [5, 6].

It usually occurs in the second and third decade of life with male predominance [6,7]. Achieving hand represents 5% of all sites.

Despite its relative frequency, clinical presentation is often atypical and the diagnosis is delayed for at least one year [8,9]. Clinical manifestations are often kind of night pain, insomniantes totally disproportionate to the size of the OO and calmed by the use of salicylates [10].

The Plain radiographs show a central lytic small image (nidus) sometimes calcified at its center, surrounded by a large reactive sclerosis interesting cortical [13]. This is especially CT or MRI, which provide more precision on the positive diagnosis and the exact location of the tumor. [10] The scanner is a useful adjunct when standard tests are normal but can not show the nidus [16,17].

MRI finds both the nidus, frequently adjacent bone and tissue edema leading to the clinically palpable swelling [16,17].

Oo has a limited growth potential explaining his constant small differentiates it from osteoblastoma [4,6,18].

Resection of the nidus is necessary and sufficient to obtain pain relief. It can be obtained by conventional open surgery or by more modern techniques [17,19]. Indeed, the emergence of percutaneous treatment techniques under CT guidance has

Tele:

E-mail addresses: abhicham@hotmail.fr

profoundly changed the treatment of these tumors. Now the surgical excisional treatment is justified only in cases in which imaging is not absolutely typical and require histological examination which unfortunately is still uncertain in percutaneous techniques [10].

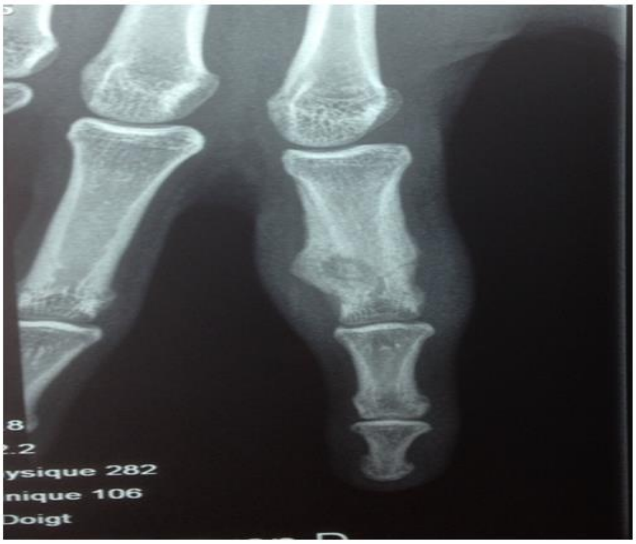

Figure 1: Radiological Appearance

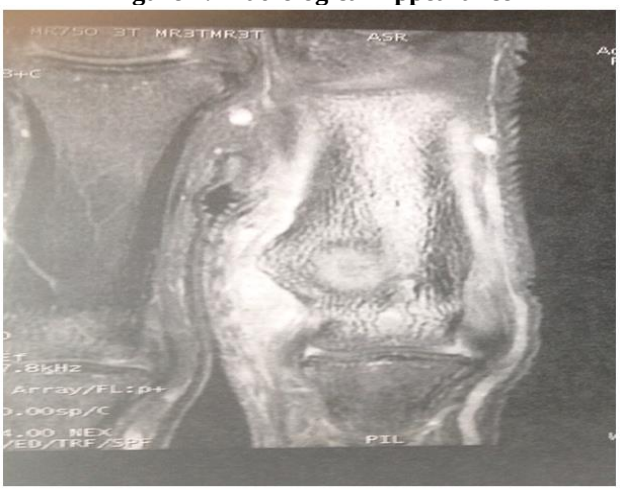

Figure 2: Apparence on MRI

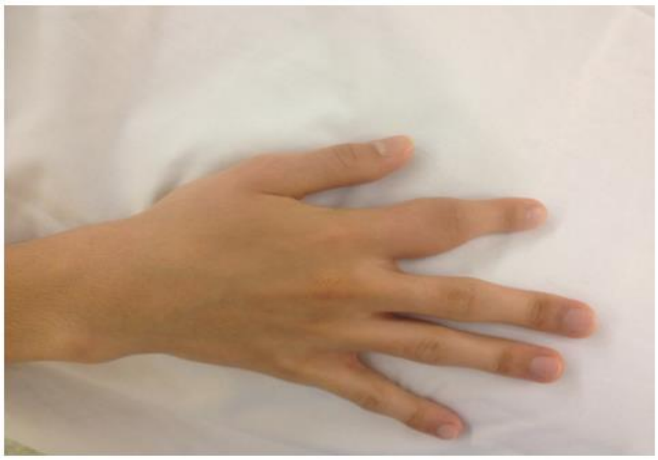

Figure 3: Swelling of the proximal phalanx of the index

The evolution is towards healing the removal of the nidus is complete. Whatever the technique used, it is necessary that the removal is complete under penalty of recurrence [23,24].

Conclusion

Oo of the phalanx is rare and the diagnosis is often delayed due to a frequently misleading clinic. The importance of the swelling of the phalanx resembles a tumor or infectious cause. Plain radiography, CT view MRI are often successful in this location. Excision is the necessary and sufficient condition to relieve pain and prevent recurrence

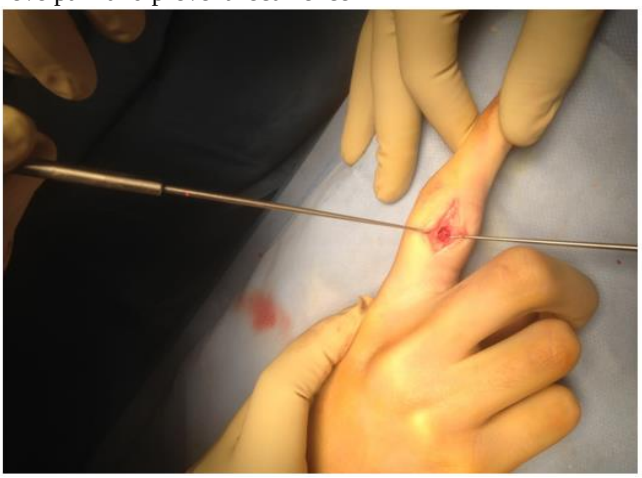

Figure 4: Intraoperative aspect (obviously graft))

References

[1] Bonnevialle P, Raihlac J-J. Ostéome ostéoïde, ostéoblastome. In:Encyclopédie Médico Chirurgicale, Appareil locomoteur. Paris: Elsevier; 2001. p. 1–19 14-712.

[2] Aube L, Roy L, Lessard R. L'ostéome ostéoïde des phalangettes. Canad Med Ass J 1968;98:455–8.

[3] Hartmann T, Preis C, Gabriel A. An osteoid osteoma as an undiagnosed cause of three years of severe pain. Anesth Analg 1997;85:1344–5.

[4] Tsang DSN, Wu DY. Osteoid osteoma of phalangeal bone. J Formos Med Assoc 2008;107(7):582–6.

[5] De Smet L, Spaepen D, Fabry G. Painless osteoid osteoma of the finger in a child. Ann Chir Main 1998;17(2):143–6.

[6] Herzberg G, Baaklini M, Al Saati M. Ostéome ostéoïde sous périostée du triquetrum en situation intra-articulaire. À propos d'un cas. Chir Main 2010;29:332–4.

[7] Bilgin S, Yildiz Y, Guclu B. Osteoid osteoma in the hand: an evaluation of 8 patients. Acta Orthop Traumatol Turc 2004;38(3):206–11.

[8] Murray PM, Berger RA, Inwards CY. Primary neoplasms of the carpal bones. J Hand Surg 1999;24A:1008–13.

[9] Lisanti M, Rosati M, Spagnolli G, Luppichini G. Osteoid osteoma of the carpus case reports and a review of the literature. Acta Ortop Belg 1996;62:195–9.

[10] H.Saidi, A.El Bouanani, A.Ayach et al. Ostéome ostéoide du lunatum : à propos d'un cas. revue de chirurgie de la main 2007 ;26 :173-175.

[11] Themistocleous GS, Chloros GD, Benetos IS. Osteoid osteoma of the upper extremity. Adiagnostic challenge. Chir Main 2006;25:69–76.

[12] Ramesh P, Khan F, Kamboj H. Painful lesions at the fingertips. J R Soc Med 2004;97:30–1.

[13] Allieu Y, Lussiez B. L'ostéome ostéoïde au niveau de la main. À propos de 46 cas. Ann Chir Main 1988;7(4):298–304.

[14] Clermont D, Partoune E, Lejeune G. L'ostéome ostéoïde de l'extrémité distal du radius. Revue de la littérature à propos d'un cas. Ann Chir Main 1991;10(2):146–7.

[15] Rosenthal DI, Hornicek FJ, Torriani M. Osteoid osteoma: percutaneous treatment with radiofrequency energy. Radiology 2003;229:171–5.

[16] Girard J, Becquet E, Limousin M. Ostéome ostéoïde de l'os trapézoide : à propos d'un cas et revue de la littérature. Chir Main 2005;24:35638.