Article ID: WMC004223 ISSN 2046-1690

Trabecular Juvenile Ossifying Fibroma (WHO-type): case report

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Article ID: WMC004223

Article Type: Case Report

Submitted on:30-Apr-2013, 03:03:20 AM GMT **Published on:** 30-Apr-2013, 05:34:21 AM GMT

Article URL: http://www.webmedcentral.com/article_view/4223

Subject Categories:HISTOPATHOLOGY

Keywords: Oral Pathology; Histopathology; Fibroma; Juvenile Tumor; Disgnosis.

How to cite the article: Cury SE, Cury R, Neves Cury S, Cury M, Pontes H, Pinto Jr D. Trabecular Juvenile Ossifying Fibroma (WHO-type): case report . WebmedCentral HISTOPATHOLOGY 2013;4(4):WMC004223

Source(s) of Funding:

Have no funding.

Competing Interests:

Have no competing intersts.

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Abstract

The aim of this paper was to present a brief case report of Trabecular Juvenile Ossifying Fibroma (WHO-type) (TJOF WHO-type), and compare the clinical and histopathological findings with current literature in order to seek clarification of the nature and behavior of the lesion.

Conclusions: The TJOF (WHO-type) is a rare fibro-osseous begnin injury with biologic aggressive behavior, and unknown etiology. Occurs in most cases in patients aged below 15 years, and the maxilla is the most involved bone. The case presented is an injury with corresponding to the characteristics described in the literature presented.

Introduction

The Trabecular Juvenile ossifying fibroma (WHO type) (TJOF – WHO type) is a benign fibro-osseous lesion with rapid growth, commonly observed in patients younger than 15 years of age. In the most of cases the lesion involves the maxilla, may be found in other cranio facial bone (Albuquerque Júnior et al., 2005; Sun et al., 2006; Espinosa et al., 2006). It features an aggressive clinical behavior causing severe facial asymmetry (Slooweg, 1997; Shand et al.,1999; Leimola-Virtamen et al., 2001; El-Mofty, 2002; Khoury et al., 2002; Patil, Nahima & Balaji, 2003; Albuquerque Junior et al, 2005).

According Lawton et al. (1997), the TJOF (WHO type) when coupled with the involvement of the orbit causes symptoms such as nasal congestion, pain, sinusitis, headache, and proptosis. Despite its rapid growth and aggressive behavior, Sun et al. (2006) related that the injury may appear asymptomatic.

Radiographically presents with a mixture of radiolucent and radiopaques images, depending of the number of mineralized tissue produced (Jaime & Goméz, 2003; El-Mofty (2002) concluded that the TJOF (WHO type) is characterized by a well-delimited radiolucent, with thin and corrugated margins, which gives cystoid appearance.

Microscopically, the FOJ is a proliferation of spindle and polyhedral cells arranged in a swirling pattern, with little formation of collagen, and showing small filaments of immature osteoid tissue within the lesion. Clusters of multinucleated giant cells can also be found scattered throughout the tumor (El-Mofty, 2002; Albuquerque Júnior, 2005; Neville et al., 2009).

Case Report

Pathology UniFOA - University of Volta Redonda, Rio de Janeiro, Brazil, and showed significant swelling in the left maxillary and showing facial asymmetry. According to history, the growth had started six months ago and show no symptoms, with reports only of nasal obstruction.

On intraoral examination was observed large increase tissue covering the hard palate and alveolar ridge in the region of premolars and molars (Figure 1A). After incisional biopsy, the histological sections revealed a benign mesenchymal lesion, represented by proliferation of spindle and polyhedral cells concentrically lamellated (Figure 1B, C and D) displaying large quantities of immature osteoid material and small clusters of multinucleated giant cells (Figure 1E and F). The histopathologic diagnosis was confirmed as TJOF (WHO-type).

Discussion

The TJOF (WHO-type) represents a relatively rare benign fibro-osseous lesion, with a higher incidencethe in the maxillar , characterized as a locally invasive lesion and rapid expansion of bone (SLOOTWEG,1997; PATIL; NAHIMA; BALAJI, 2003). It is usually found in people under 15 years (GODOY et al., 2003; ALBUQUERQUE JÚNIOR et al., 2005; SUN et al., 2006; ESPINOSA et al., 2006), and no gender preference (NEVILLE et al., 2004). Because of its aggressive biological behavior and the high recurrence rates, the injury inspires greater care (RINAGGIO; LAND; CLEVELAND, 2003). The case reported refers to a localized left maxillar lesion, causing rapid growth and facial asymmetry, in a patient 15 years old with clinical features similar to those reported in the literature.

According to Wenig et al. (1995) e Lawton et al.

(1997), the lesion may present different clinical manifestations, among them sinusitis, meningitis, periorbital pain and sometimes expansion of some craniofacial bones, causing facial pain

In spite of the cited authors have asserted that the lesion is symptomatic, Sun et al. and Espinosa et al., reported in the 2006, that the injury is asymptomatic. In our case, there was no report of any painful symptoms, which is in agreement with reports of Sun and Espinosa.

Almost all of authors reported that the lesion shows rapid growth, which was found and confirmed by us. However Neville et al. (2009), mentions that the lesion has slow growing, unlike other authors and of the our observations

Radiographically the TJOF (WHO-type) is usually a benign lesion with a radiolucent area or radioapaca depending on the amount of mineralized tissue (JAIME; GOMÉZ, 2003), This is in accordance with the work of Espinosa et al. (2006), where they report that the lesion is represented by radiolucent areas circumscribed and in some cases shows radiopaque central parts Only El-Mofty (2002) mentions the fact that the TJOF (WHO-type) is characterized by a radiolucent well-delimited margins thin and corrugated which gives cystoid appearance.

Microscopically, the FOJT is a proliferation of spindle and polyhedral cells, which tends to arrange in a vortical pattern, with little formation of collagen, and showing small filaments of immature osteoid cell within the lesion. Clusters of multinucleated giant cells can also be found scattered throughout the tumor (ALBUQUERQUE JÚNIOR, 2005; SOUZA, 2000; EL-MOFTY, 2002; NEVILLE et al., 2004). In the case presented all of these characteristics were found, which confirmed the diagnosis.

Conclusion

The Trabecular Juvenile Ossifying Fibroma (WHO-type) is a rare fibro-osseous begnin injury with biologic aggressive behavior, and unknown etiology. Occurs in most cases in patients aged below 15 years, and the maxilla is the most involved bone. The case presented is an injury with corresponding to the characteristics described in the literature presented, and that needs further studies to better their understanding.

The case presented is a lesion with characteristics corresponding to those described in the literature, with unknown origin, and requires further studies for better understanding.

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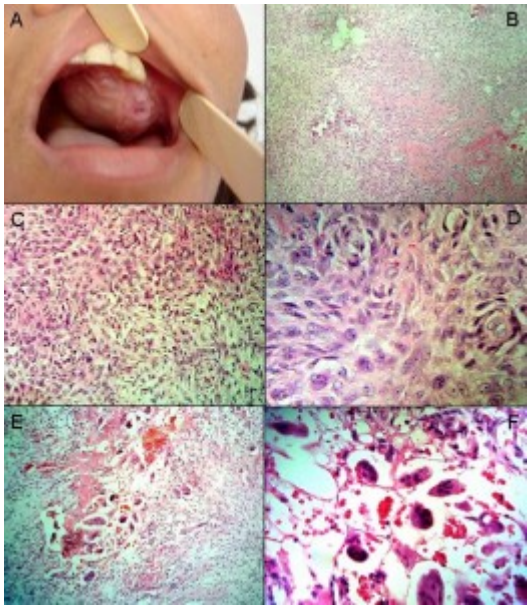
Illustrations

Illustration 1

Increased growth covering the hard palate and the alveolar region of the premolars and molars. Proliferation of spindle and polyhedral cells arranged in a swirling patternE 100x; E 400x; E -1000X). Clusters of giant cells surrounding immature osteoid formation E - 100X; E -1000X).



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