Case Report

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Fibrous Dysplasia of the Mandible

Rahul Sharma*, Vijayluxmi, Rohit Sharma***, Pankaj Bansal******

Abstract

Fibrous dysplasia is an uncommon, benign, slowly progressive disorder characterized by replacement of normal mineralized bone with fibrous tissue and immature woven bone. The condition is typically seen in childhood and adolescence. This case report highlights presence of the disorder in a 25 year adult patient, managed by surgical excision and chemical cauterization with carnoy solution.

Keywords: Fibrous Dysplasia; Adolescence; Polyostotic; Mandible.

Introduction

Fibrous dysplasia is an uncommon, benign, slowly progressive disorder in which normal mineralized bone is replaced by proliferating fibrous tissue and immature woven bone. It primarily replaces cancellous medullary bone and may give rise to expansion, distortion, and structural weakness of the involved bony skeleton [1]. McCune and Bruch [2] and Albright [3] recognized and separately reported the lesion as a distinct entity in 1937. In 1938, Lichtenstein [4] coined the term fibrous dysplasia.

Fibrous dysplasia is found in 3% of all bony tumours and in over 7% of all non-malignant tumours of bone [5]. the normal bone structure is replaced by fibrous connective tissue with woven bony trabeculae. The disease can involve any bone in the body. Fibrous dysplasia can be monostotic or, less frequently, polyostotic [6].

Clinical observations indicate that fibrous dysplasia usually begins in childhood and chronically progresses throughout puberty and adolescence, and progression stops after adolescence in most cases [7]. This report describes a fibrous dysplasia in the mandibular body region that was treated with excision of the denuded bone.

Case Report

A 25-year old male reported to us with a chief complaint of swelling over the right side of face for the last 6 years. History revealed that the patient had fallen over the right side of face when he was 6 years old. The swelling was painless, bony hard in consistency. Intraoral examination revealed obliteration of the buccal vestibule in the right premolar-molar region. Orthopantomogram was done which revealed a mixed radiolucent-radioopaque lesion on the right side of mandible, extending from the mesial aspect of first premolar to the mesial aspect of second molar.

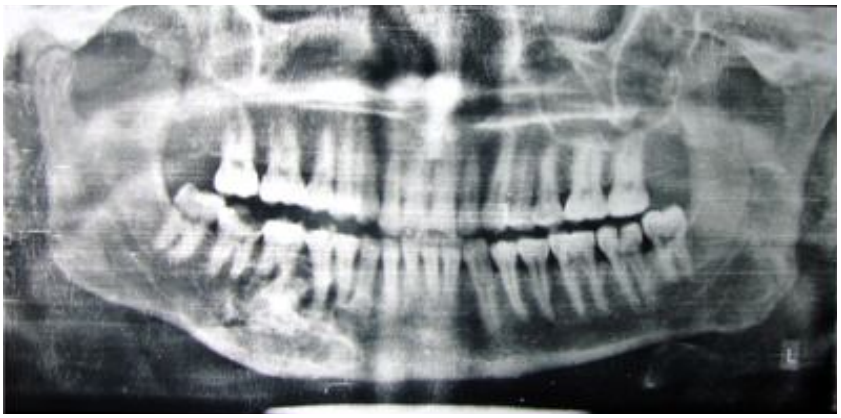
The patient was planned for excisional biopsy of the lesion under conscious sedation. A vestibular incision, extending from first premolar up to the retromolar region was given.

The overlying bone was removed with bur and osteotome and the lesion was exposed. The entire lesion was curetted out and the cavity was treated with Carnoy's solution. The dead space was closed with gel foam coated with gentamycin, and the flap was sutured.

The lesion was sent for histopathological examination, which confirmed the diagnosis of fibrous dysplasia.

Author's Affiliation: *Senior Lecturer,****Professor, Sudha Rustagi College of Dental Sciences, Bhopani more, Faridabad, Haryana. **Assistant Professor,Deptt. of Dental Saheed Hasan Khan Mewati Medical College, Nalahar, Haryana. ***Senior Lecturer, Yamuna Institute of Dental Sciences, Yamunanagar, Haryana.

Reprints Requests: Pankaj Bansal, Professor, Sudha Rustagi College of Dental Sciences, Sector 89, Kheri More, Faridabad, Haryana 121002.
E-mail: pankajbansal363@gmail.com



Discussion

Although progression of fibrous dysplasia is considered to be common in childhood and usually stops after adolescence, there are some exceptional cases. Katz et al reported four cases of cranio-facial fibrous dysplasia that occurred after adolescence (over age of 25) and they mention that some cases of cranio-facial fibrous dysplasia can occur after adolescence and progress in adulthood [8].

Many patients with fibrous dysplasia have episodes of trauma to the involved region [9]. The patient described in this report also had a history of trauma to the site when he was 6 years old.

Currently there are no uniformly accepted guidelines for treatment of fibrous dysplasia. Surgical treatment becomes necessary whenever clinical symptoms occur [10]. Complete surgical excision and immediate reconstruction or conservative contour shaving have gained general acceptance to control fibrous dysplasia [7,11]. Teeth involved in fibrous dysplasia remain vital even when the surrounding tissue is invaded. Prevention of tooth loss should be a major aim of the treatment [12]. The preservation of the inner cortex and the lower border are of paramount importance in maintaining the contour and architecture of the lower third of the face [13], as was done in the present case. Mandibular reconstruction with autogenous bone and PRP in an animal model also showed a considerable healing enhancement compared with bone alone [13]. Medical management using bisphosphonates has been reported to slow the progression of the lesion [14]. In a retrospective study of 20 cases with fibrous dysplasia involving long bones followed for 6 years, 12 of 13 surgically treated patients presented satisfactory functional outcomes [15].

In the present case, as there was a possibility of misdiagnosis of a more aggressive condition, chemical cauterization with Carnoy's solution was done after the complete excision of the lesion.

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