CASE REPORTS

Prosthetic Reconstruction after Surgical Resection of Fibrous Dysplasia of the Maxillary and Palatine Bone

A Cherkaoui, O Nawar, I Fouad, B Najib, N El Alami

ABSTRACT

Fibrous dysplasia is a rare disorder of the bone. It is seen in two main forms of presentation: monostotic and the polyostotic. A case of monostotic fibrous dysplasia of the maxillary and palatine bones in a 22-year old man who received prosthetic reconstruction is presented with a review of the literature.

Keywords: Fibrous dysplasia, maxillary bone, prosthetic reconstruction

Reconstrucción Prostética tras la Resección Quirúrgica de la Displasia Fibrosa del Hueso Maxilar y el Palatino

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RESUMEN

La displasia fibrosa es un trastorno raro del hueso. Se le ve en dos formas principales: la monostótica y la poliostótica. Junto con la correspondiente revisión de la literatura, se presenta un caso de displasia fibrosa monostótica de los huesos maxilar y palatino en un hombre de 22 años que recibió una reconstrucción prostética.

Palabras claves: Displasia fibrosa, hueso maxilar, reconstrucción prostética

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INTRODUCTION

Fibrous dysplasia is an idiopathic disease which causes progressive expansion and deformity of bones. Fibrous dysplasia can involve multiple bones (polyostotic) or a single bone (monostotic). Males are affected as commonly as females (1) and usually first present before the third decade of life (2). Fibrous dysplasia usually has a relatively benign course with the major symptom being cosmetic deformity, which may become severe. Malignant transformation has been reported in up to 0.5% of patients (3, 4). However, vital structures such as the visual apparatus may also be affected with resultant loss of function. This report presents a case of isolated fibrous dysplasia of the maxilla and palatine bones in a 22-year old male.

Authors confirm that informed consent was obtained from the patient for publication of the case report and any associated images.

CASE REPORT

A 22-year old male presented with a history of swelling of the left-side of the face and with gradual increase in size which first appeared when he was 12 years of age. Physical examination found an expansion of the left cheek with the elevation of the eye and depression of the lip (Fig. 1). A computed tomography (CT) scan (Fig. 2) showed the radiological characteristics of bone deformation and its extension. The patient underwent a prosthetic reconstruction with calcium phosphate ceramics after resection of fibrous dysplasia

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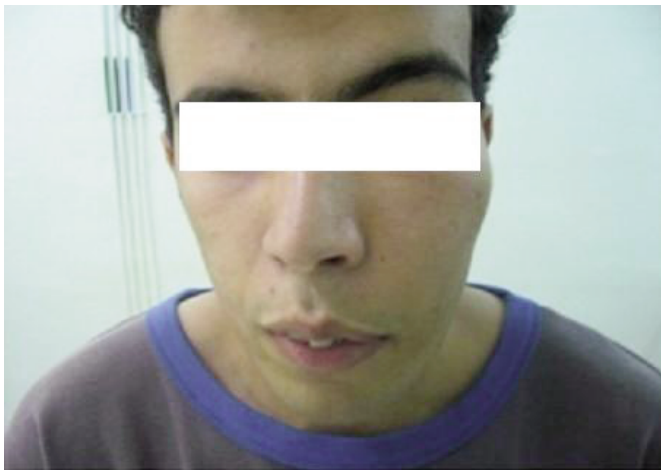


Fig. 1: Swelling on the left side of the patient's face, with elevation of the eye and depression of the lip.

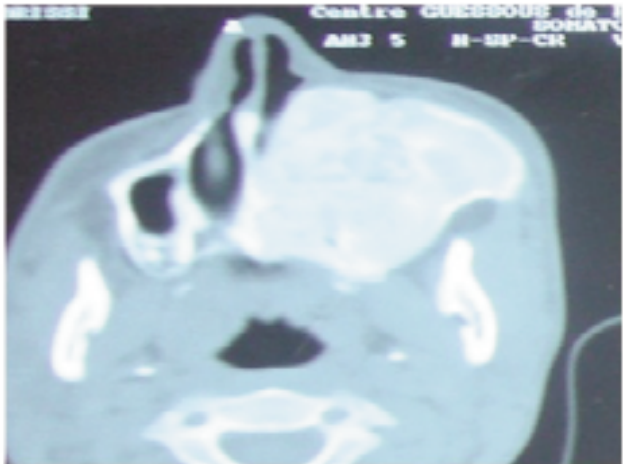


Fig. 2: Computed tomography scan shows bone deformation and its extension.

Fig. 3

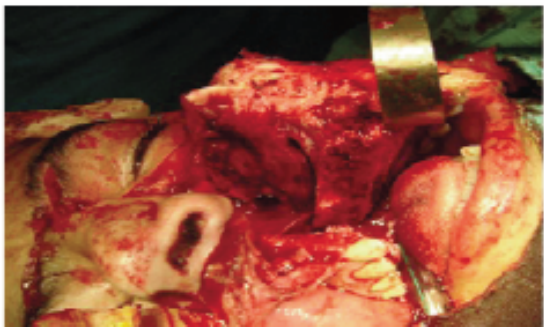
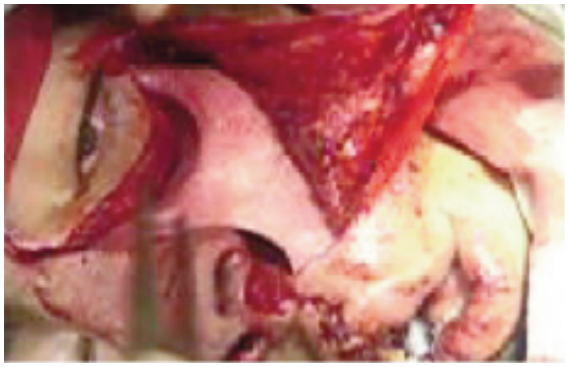


Fig. 4



Figs. 3−4: Patient underwent prosthetic reconstruction with calcium phosphate ceramics after resection of fibrous dysplasia of the maxillary and palatine bone by infraorbital and paralateronasal incisions.

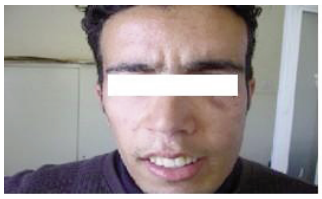


Fig. 5a

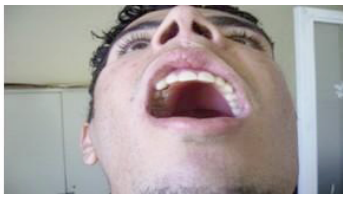


Fig. 5b

Fig. 5a−b: Twelve months postoperatively, there is insignificant asymmetry and patient is pleased with the result.

of the maxillary and palatine bone by infraorbital and paralateronasal incisions (Figs. 3, 4). After 12 months of follow-up, there was still insignificant asymmetry but much less than the preoperative appearance (Figs. 5a−b) and the patient was pleased with the result.

DISCUSSION

Fibrous dysplasia is a developmental anomaly of the skeletal system where an anomaly of the bone-forming mesenchyme manifests as defects in osteoblastic differentiation and maturation. It is a non-hereditary disorder of unknown origin and is commonly seen in children between the ages of three and 15 years. It is proposed that the cause is a gene mutation during embryogenesis (5).

Clinical symptoms arise from the expansion of the bone which compresses adjacent structures. The disease is progressive but with time will often burn out and stabilize. Differential diagnoses include Paget's disease, osteofibrous dysplasia, nonossifying fibroma, simple bone cyst, giant cell tumour, haemangioma, meningioma and eosinophilic granuloma (6). Medical therapy with bisphosphonates may stabilize the lesions and play a role in prevention of progression of the disease in adults.

Surgery is recommended as the modality of treatment to relieve the intractable pain and the skeletal deformity. The type of surgery performed varies from shaving and contouring of the bone to radical surgery. However, major surgery should be done with caution in a young patient where recurrence and progression may occur which would require further surgery to maintain the cosmetic appearance.

CONCLUSION

The management of facial dysplasia is very complex. Surgery with a safe oncologic resection and symmetrical durable reconstruction is recommended as the modality of treatment.

Authors declare that they have no competing interests.

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