Giant Cell Granuloma of the Maxillary Sinus; a Case Report

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Abstract

World Health Organization has classified Central giant cell Granuloma (CGCG) as a rarely aggressive idiopathic benign intraosseous lesion that occurs almost exclusively in the jaws. It occurs most frequently in young women (aged <30 y). Hereby we present a rare case of CGCG in a 28 years old female.

Keywords: Giant cell, Granuloma, Maxillary sinus.

(J Med J 2013; Vol. 47 (3):260- 265)

Received	***Accepted***
November 18, 2009	*March 21, 2013*

Introduction

Central Giant Cell Granuloma(CGCG) is an un common benign lesion of the head and neck which almost exclusively affects the maxilla and mandible [1,2,3]. C GCG is a benign lesion but it has a locally destructive character and can be fatal [4, 5]. Central CGCG is defined by the world health organization as an intraosseous lesion consisting of cellular fibrous tissue that contains multiple hemorrhagic foci with aggregations of multi nucleated giant cells and occasionally trabeculae of woven bone [3]. Children and young adults are affected by GCG more than other age groups and it has slight female preponderance [2, 4,]. Commonly these kinds of tumors are seen and diagnosed by maxillofacial surgeons, but Ear Nose and Throat (ENT) surgeons still facing and consequently treating these rare tumors due to the fact that this area is overlapped between the two specialties. Surgical treatment of CGCG is the traditional and still the most acceptable and efficient way of treating CGCG. Other option for treating CGCG is the injection of steroids inside the tumors especially in young children [1, 2, 6, 7, 8, 9,].

Case Report

A 28 years old lady, presented to ENT department at Jordan University Hospital with left sided facial swelling and pain, nasal blockage, epiphora, and exophthalmus of 6 months durations. Apart from this her past medical history was free and she denied smoking or other bad habits. On examination the swelling was hard, non-tender with a diameter of 7 centimeters that is involving the lower anterior of the left maxilla. Visual examination revealed normal vision and there were no neck masses or any other abnormalities in the field of head and neck region.

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CT scan was planned and the results revealed a large opacity involving the left maxillary sinus (figures 1, 2). A surgery for taking biopsy was planned and was done a week later using the endoscopic technique for that. The histopathologists confirmed the diagnosis of CGCG (figure 3). Two weeks later the tumor was totally excised (figure 4), that was confirmed by the frozen section report. We used the combination of endoscopic and open techniques to excise the tumor. The tumor was involving the left maxillary sinus, the floor of the orbit, and slightly the medial wall of the nose. We injected hydrocortisone into the cavity after the surgery was completed in order to help prevent recurrence.

Follow-up was carried out for three years, during which we had to see and examine the patient every month and a CT scan was done yearly to make sure that there was no recurrence.

Discussion

CGCG is a rare disease [11] that occurs at any age, but most commonly it is diagnosed in the second & third decade of life. Females are more commonly affected by this kind of tumor than males [2, 4, and 12]. CGCG usually present as a painless but some time due to rapid growth and erosion of the bone may cause pain [12]. Despite the fact that these lesions are expansive and invasive they do not invade through the perineural sheath to cause parasthesia [13]. Although this disease is a benign lesion, but cases of metastasis and malignant transformation to osteosarcoma have been reported [14] .The etiology of CGCG is still not identified, but some authors suggest that trauma in particular repeated minor trauma can be the cause [15, 16], others [17] believe that hemodynamic disturbance in the bone marrow is the underlying cause.

Histopathologically CGCG is a lobulated mass of proliferative vascular connective tissue paved with giant cells lying in a vascular stroma [17].

Radiological features of this lesion vary from undefined destructive lesions to a well defined multilocular appearance and the best tool to see these details is through the CT-Scan images [18]. The conventional therapy of CGCG is a wide local curettage (excision) which has a high success rate and low recurrence rate [8]; however some studies have suggested intralesional injection of steroids, since there are microscopic similarities between sarcoidosis and osteoclasts [19].

Recurrence after surgery is ranged from 4 to 20 %, but for locally aggressive CGCG it is much higher than these figures [17, 20].

Conclusion

CGCG is a rare benign lesion of Head and Neck region with predilection for maxillary and mandibular involvement and yet the best treatment option is wide surgical excision.

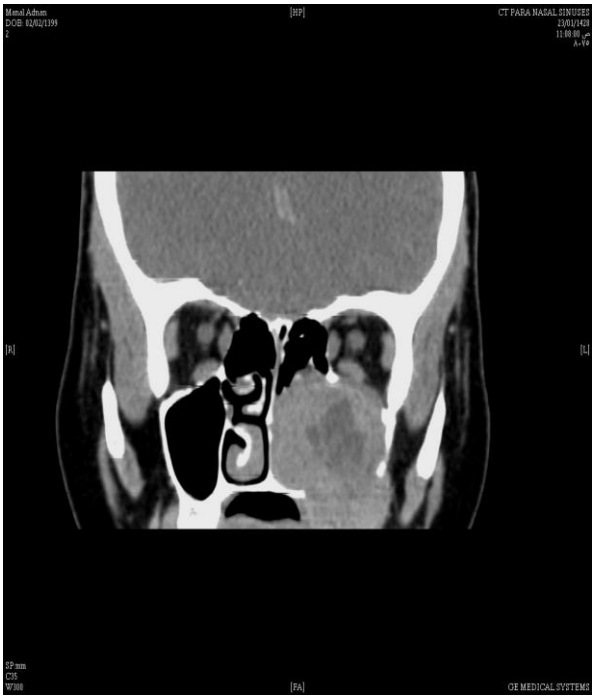

Figure (1) Preoperativee coronal section CT-Scan

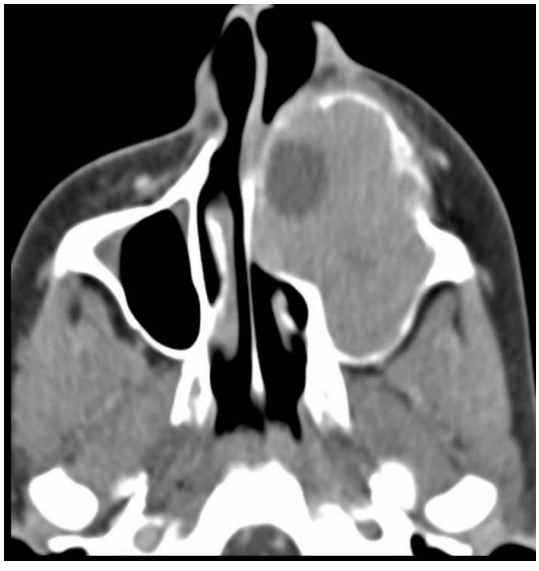

Figure (2) Preoperative axial section CT-Scan

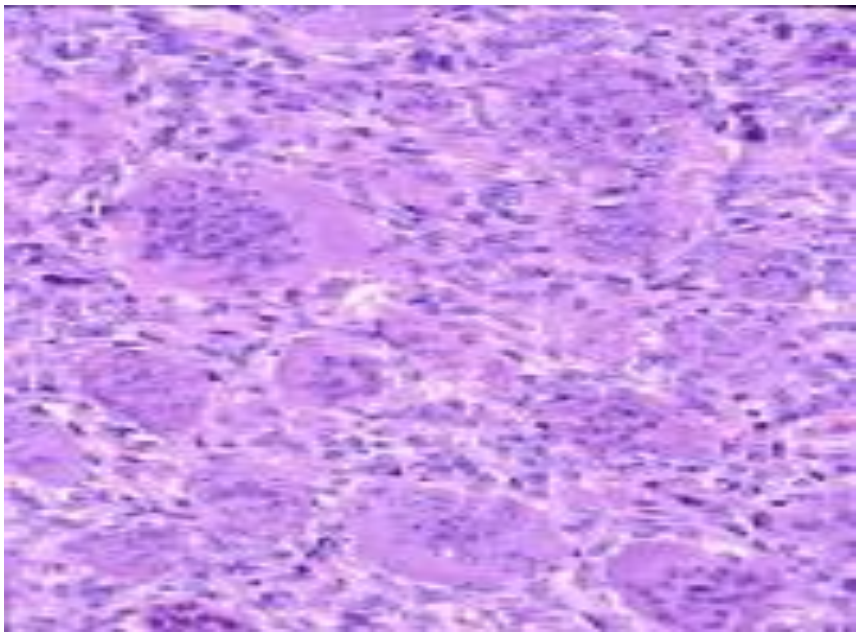

Figure (3) Histopathology picture of the tumor

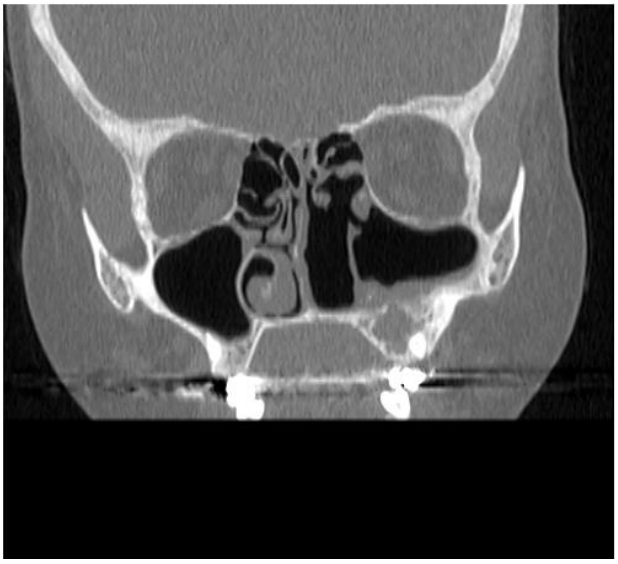

Figure (4) post operative CT Scan of the operative field

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الورم الجيني ذو الخلايا العملاقة المتوسطة

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الملخص

صنفت منظمة الصحة العالمية مرض الورم الجيني ذا الخلايا العملاقة المتوسطة (CGCG) بأنه آفة داخل العظم حميدة نادرة الحدوث، ولكنه عدواني ومجهول السبب ويحدث تقريبا في الفكين. ويصيب عادة النساء الشابات (اللواتي تزيد أعمارهن على 30 عاماً). و في هذا البحث نقدم حالة نادرة لأنثى تبلغ من العمر 28 عاما

الكلمات الدالة: الورم الجيني، الخلايا العملاقة المتوسطة، منظمة الصحة العالمية.