Scholars Journal of Medical Case Reports

OPEN ACCESS

Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com/journal/sjmcr/home

The Giant Cell Granuloma about a Case

Azzam Imane[1*], Dinkel Emilie[2], Florent Hoareau[2], Leila Essakalli[1]

[1]ENT - Head and Neck Surgery, HSR Rabat Morocco
[2]ENT - Head and Neck Surgery, GHPP Montelimar France

DOI: 10.36347/sjmcr.2019.v07i08.027 | **Received:** 20.08.2019 | **Accepted:** 27.08.2019 | **Published:** 30.08.2019

***Corresponding author:** Azzam Imane

Abstract **Case Report**

Giant cell granuloma (GCG) is an infrequent benign lesion of the jawbone that sometimes exhibits aggressive behavior. The main locations are the maxillae, especially the mandible, with some extragathic bone sites, more frequently in women with very variable radiological aspects, however, the diagnosis will be made by histological examination. We report the case of a 78-year-old patient with giant-cell granuloma who was slow-moving and who underwent surgical excision + curettage. He currently available bibliographic data concerning the various possible GCG treatments show that curettage surgery, whether or not associated with larger excision, is the conventional treatment that causes the least recurrence.

Keywords: Giant cell granuloma, radiological aspects, bibliographic data.

INTRODUCTION

The giant cell granuloma (GCG) called gingival giant epulisis an infrequent benign lesion of the jaws, sometimes with aggressive behavior.It was originally described by Jaffe in 1953 as a local repair reaction.

The main locations are the maxillae, especially the maxilla, sometimes with bone sites, especially the small distal bones (metacarpus, phalanges, metatarsals), but all localizations are possible.

This lesion occurs more frequently in women. There are very variable radiological features, however, the diagnosis will be made only by histological examination [1].

The case reported relates to a 78-year-old patient with a giant-cell repair granuloma of slow progression who was treated with surgical resection.

OBSERVATION

78-year-old patient, with no significant pathological history who consulted for oral swelling, progressing for 6months coinciding with multiple dental extractions. This swelling progressively increased in volume with episodes of oral bleeding, the examination revealed the presence of a retro molar mass facing tooth 17, fleshy rounded, purplish, 1.5cm in diameter, and firm consistency without bleeding in contact with a paramedian granulomatous maxillary gingiva (Picture-1).

Nasofibroscopy did not indicate a suspicious lesion, and the cervical examination did not note palpable lymphadenopathy

The CT scan (Picture-2) showed a rounded formation, measuring about 13 mm, locatedat the back of the tooth 17, with contrast enhancement. Its contours are clear, without bone lysis. Can evoke an arterial angioma.

The angio - MRI returned to a fleshy lesion or venous angioma rather than arterial angioma. A surgicalbiopsy :under general anesthesia suspected a repair granuloma giant cells maxillary.

A biologicalassessmentincluding an exploration of the blood count, an enzymological assay of LDH (Lactate Dehydrogenase) normal value, a calcium phosphate biological assessment made it possible to eliminate a brown tumor of the maxillaesecondary to a hyperparathyroidism

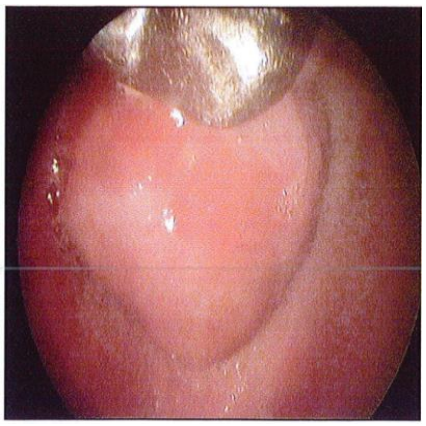
The patient underwentexeresis of the tumor under general anesthesia, endo-buccal, which was haemorrhagic and friable, throughout the excision phase. With a complete curettage of the entire colonized bone remodeled, of consistency "wetsugar".

Because of its implantation in the tumor, the tooth 17 is extracted. The completeness of the excision is Controlled by a 30° opticsinusoscopy. The sinus was uninjured, with reconstruction by a fammflap (Picture-3).

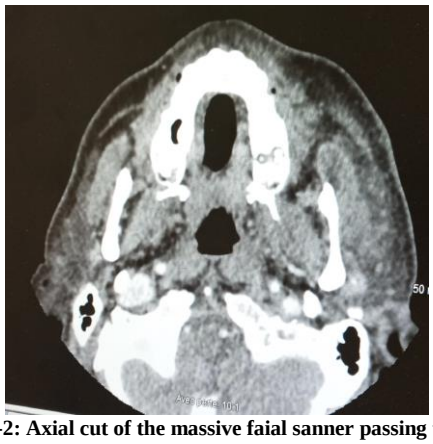
Anatomo-pathological examination confirmed the diagnosis of repair granuloma with giantcells of the maxillary, high light ingfasciculateranges of fusiform cells fairly regularly accompanied by collagenous dots strewn with numerous multinucleated giant cells.

On this background, there are some plaques of hemorrhagic suffusion with siderophages, without mitotic or nuclear abnormalities. The post operative course was simple with weaning of the pedicled flap at 2months

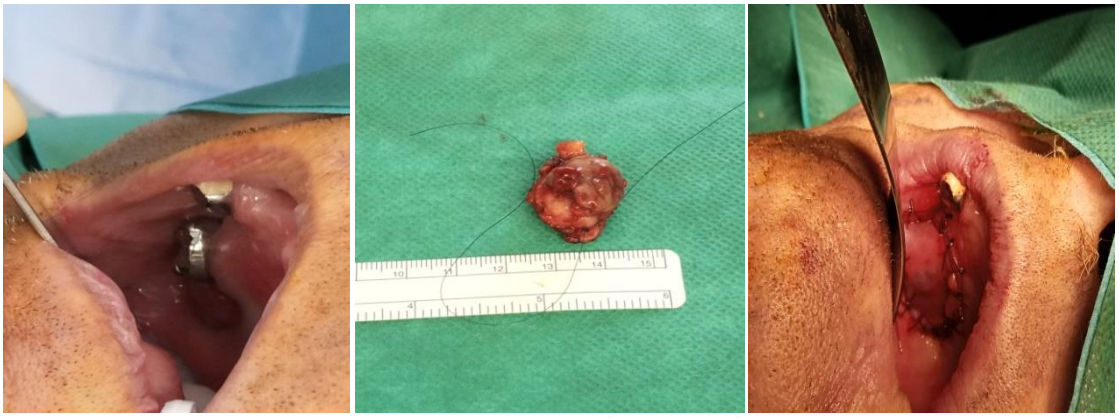
The follow-up of our patient did not note a recurrence on a follow-up of 6 months. With good viability and trophicity of the flap (Picture-4).



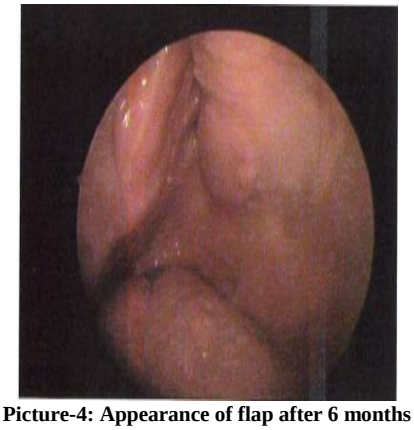
Picture-1: Macroscopic aspect of the lesion



Picture-2: Axial cut of the massive faial sanner passing through the lesion



Picture-3: Intra-Operative image of the exerese of the lesion



Picture-4: Appearance of flap after 6 months

DISCUSSION

GCG is a benign tumor, which is part of giant cell tumors and pseudo tumors, still poorly understood, of unknown etiology and very variable evolution.

According to the WHO classification, tumors and pseudo tumors are part of a polymorphous tumor group of non odontogenic origin that includes all conjunctival maxillary tumors [4].

Thus Giant Cell Tumors are dividedinto 3 majorentities:

- Cherubism or cysticdiseasemultilocularfamily of maxillary,
- The GCG theaneurysmalcyst.

To thesethreeentitiesweadd 2 other types of lesions [4]:

- The truetumorwithgiantcell,
- The browntumors of hyperparathyroidism

The GCG occurs more frequently in women than in men with a location twice as common in the mandible as in the maxilla .In men, the peak incidence is between 10 and 14 years, while in women it is found between 15 and 19 years [5].

In our case it is an elderly male subject with a localization at the level of the maxillary upper. Rare cases are associated with genetic abnormalities such as Cherubism, Noonan Syndrome, or Neurofibromatosis Type 1.

The etiology of GCG is currently poorly specified but the hypothesis of post traumatic intra osseous hemorrhageis the most plausible. In most cases, the characteristic macroscopic appearance is a fleshy, reddish brown mass, resembling a splenicpulp [3].

Radiologically, appearance ranging from a small unilocular lesion to a large multilocularlesion associated with dental displacements, root resorptions or perforations of the cortical bone [6]. In our case the appearancewas suggestive of a rather vascular lesion.

The peculiarity of this lesion lies in the difficulty of its clinical and radiographicdiagnosis, soonly a biopsy will make it possible to establish the diagnosis and eliminate the suspicion of anyothergiantcelllesion (browntumor of the maxillaesecondary to hyperparathyroidism, a truetumoratgiantcells, cherubism).

Currently the conventionaltreatment of GCG is surgical and consists of curettage associated or not with an excision. The recidivism rate ranges from 11% to 35% [9].

Our observation confirms the superiority of surgery to limit recurrence although our decline is insufficient. A 2005 Lange *et al*., [9] study in Germany of 80 patients with GCG (16 aggressive cases and 64 non-aggressive cases) and all treated with curettage, reported a recurrence in 26.3% of patients. in a period of 0 to 10 years [10].

The Kruse-Loslerstudy of 2006, involving 26 patients (10 aggressive cases and 16 non-aggressive cases) treated by curettage and surgicalresection, reported a recurrence of 11.5% within 9 months to 12 years [10].

Such curettage associated or not with an excision, mayrequire the avulsion of the teeth opposite or increase the risk of injury of the sur rounding anatomical elements. As such, other less invasive therapies have been proposed in the treatment of GCG.

Some authors have reported favorable results with intra-lesional administration of corticosteroids [11-13]. However, currently, no controlled clinical study is published concerning this therapy. Other authors have also demonstrated the favorable role of calcitonin in the treatment of GRCG [10, 14, 15].

Interferon α, administered as monotherapy in the treatment of aggressive GCG, also seems capable of interrupting the growth of lesions, sometimes of reducing their size. It is often necessary to add a surgical procedure to eliminate the lesion [10].

In this case, it is difficult to attribute the share of each therapeutic in the overall success of the treatment. Recently, a cytokine called RANKL, strongly implicated in the activity of osteoclasts including giant cells, has been found in GCG [16]. A cytokine which is inhibited by osteoprotegerin, which could then limit the extension of the tumor. Finally, Imatinib (Gleevec, Novartis Pharma, Basel, Switzerland) a protein tyrosine kinase inhibitor of osteoclastic activity, used in the treatment of chronic myeloid leukemia and gastro intestinal tumors [17]. Preliminary results of GCCG treatment with Imatinib are promising [18]. Radiotherapy is reserved for recurrent or unresectable cases [7].

CONCLUSION

GCG is an infrequent tumor in daily practice.Its rarity leads to a difficulty of diagnosis, which calls for a rigorous approach requiring not only careful interrogation but also careful clinical examination, adapted imaging, a targeted biological assessment and an efficient anatomopathological analysis.

The currently available bibliographic data concerning the various possible GCG treatments show that curettage surgery, whether or not associated with larger excision, is the conventional treatment that causes the least recurrence.

Finally, it is necessary to insist on the interest of the early detection and the knowledge of the diagnostic elements of this type of tumors, often benign, but whose destructive consequences are disabling.

RÉFÉRENCES

1. Jaffe HL. Giant-cell reparative granuloma, traumatic bone cyst, and fibrous (fibro-osseous) dysplasia of the jawbones. Oral Surgery, Oral Medicine, Oral Pathology. 1953 Jan 1;6(1):159-175.
2. Mazur G, Bogunia-Kubik K, Wrobel T, Kuliczkowski K, Lange A. TGF-β1 gene polymorphisms influence the course of the disease in non-Hodgkin's lymphoma patients. Cytokine. 2006 Feb 7;33(3):145-149.
3. Sentilhes C, Michaud J. Lésions à cellules géantes du maxillaire. Difficultés diagnostiques. Revue de stomatologie et de chirurgie maxillo-faciale. 1986;87(2):102-107.
4. Barthélémy I, Mondié JM. Giant cell tumors and pseudogiant cell tumors of the jaws. Revue de stomatologie et de chirurgie maxillo-faciale. 2009 Sep;110(4):209-213.
5. de Lange J, van den Akker HP, Klip H. Incidence and disease-free survival after surgical therapy of central giant cell granulomas of the jaw in The Netherlands: 1990–1995. Head & Neck: Journal for the Sciences and Specialties of the Head and Neck. 2004 Sep;26(9):792-795.
6. Stavropoulos F, Katz J. Central giant cell granulomas: a systematic review of the radiographic characteristics with the addition of 20 new cases. Dentomaxillofacial radiology. 2002 Jul;31(4):213-217.
7. Hamama J, Khalfi L, Sabani H, El Khatib MK. Granulome réparateur à cellules géantes du maxillaire : à propos d'une forme agressive le courrier du dentiste Publication; 2015 September 1.
8. Ahossi V, Vincent S, Duvillard C, Larras P, Petrella T, Perrin D. Granulome réparateur à cellules géantes du maxillaire: à propos d'un cas. Revue d'odonto-stomatologie. 2010;39(2):135-144.
9. de Lange J, van den Akker HP. Clinical and radiological features of central giant-cell lesions of the jaw. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology. 2005 Apr 1;99(4):464-70.
10. Lange JD, van den Akker HP, Van den Berg H, Richel DJ, Gortzak RA. Limited regression of central giant cell granuloma by interferon alpha after failed Calcitonin therapy: A report of two cases. Int J Oral Maxillofac Surg. 2006;35:865-869.
11. Abdo EN, Alves LC, Rodrigues AS, Mesquita RA, Gomez RS. Treatment of a central giant cell granuloma with intralesional corticosteroid. British Journal of Oral and Maxillofacial Surgery. 2005 Feb 1;43(1):74-76.
12. Carlos R, Sedano HO. Intralesional corticosteroids as an alternative treatment for central giant cell granuloma. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology. 2002 Feb 1;93(2):161-166.
13. Kurtz M, Mesa M, Alberto P. Treatment of a central giant cell lesion of the mandible with intralesional glucocorticosteroids. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology. 2001 Jun 1;91(6):636-637.
14. O'Regan EM, Gibb DH, Odell EW. Rapid growth of giant cell granuloma in pregnancy treated with calcitonin. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology. 2001 Nov 1;92(5):532-538.
15. Pogrel MA. Calcitonin therapy for central giant cell granuloma. Journal of oral and maxillofacial surgery. 2003 Jun 1;61(6):649-653.
16. Liu B, Yu SF, Li TJ. Multinucleated giant cells in various forms of giant cell containing lesions of the jaws express features of osteoclasts. Journal of oral pathology & medicine. 2003 Jul;32(6):367-375.
17. de Lange J, van den Akker HP, van den Berg H. Central giant cell granuloma of the jaw: a review of the literature with emphasis on therapy options. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology. 2007 Nov 1;104(5):603-615.
18. Dewar AL, Farrugia AN, Condina MR, To LB, Hughes TP, Vernon-Roberts B, Zannettino AC. Imatinib as a potential antiresorptive therapy for bone disease. Blood. 2006 Jun 1;107(11):4334-4337.