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Case Report

Maxillary sinus osteoma: A case report

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Abstract

Background: Osteomas are tumors with generally develop in the upper airways. They are very infrequent.

Objective: to describe the clinical, radiological, and histopathological characteristic; as well as the therapeutic conduct in patient with an osteoma in the left maxillary sinus.

Clinical case: a 52-years old female patient who came to the otorhinolaryngology service in 2019, referred by her odontogist due to pain and reddening in the area of the left molar, with a history of facial traumatism she had had about five year ago. She was diagnosed with an osteoma in the left maxillary sinus by means of the physical examination and imaging studies. It was decided that she should undergo surgery using Caldwell-Luc operation or antrostomy; diagnosis was confirmed through histopatological studies.

Conclusions: an osteoma in the left maxillary sinus is a benign, infrequent lesion. Physical examination can occasionally show elements for its diagnosis, but imaging studies can show the lesion and make the correct planning of surgery possible. Caldwell-Luc operation or antrostomy is the ideal approach to a large osteoma.

Keywords: Osteoma; Caldwell-Luc; antrostomy; maxillary sinus; paranasal sinus.Osteoma; Caldwell-Luc; antrostomy; maxillary sinus; paranasal sinus.

Introduction

Osteomas are tumors that generally develop in the upper airways, [1] are pathological entities that occur sporadically in the craniofacial region, [2] can be single or multiple, [3] is a benign osteogenic lesion [4] with slow and progressive growth, [3] formed by well-differentiated mature bone tissue, [5] histologically they can be classified as spongy, compact and ebural osteoma [1]. Benign osteoblastic tumors are characterized by the presence of typical osteoblasts, with normal nuclei and present the histological appearance of osteoid tissue made up of normal cells [5].

Osteomas according to their location and development are classified from the periosteum (peripheral osteoma), from the endostium (central osteoma) or from the soft tissue, especially in the muscle (extraskeletal osteoma) [6]. The treatment of osteomas in asymptomatic patients remains controversial; However, most authors agree that symptomatic patients or patients with rapidly growing tumors should preferably be treated with surgery [7]. The incidence varies between 1-3%; the age pattern being variable and with a certain predisposition for the male sex [7, 8].

The present study aims to describe the behavior in a clinical case of osteoma in the left maxillary sinus treated at the Otorhinolaryngology service of the Martín Chang General Teaching Hospital in the municipality of Nuevitas, Camagüey.

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Clinical Case

52-year-old white female patient who attended the Otorhinolaryngology service in 2019, referred by dentistry for presenting "pain and redness in the left malar area" with a history of facial trauma of approximately five years. On physical examination it is observed in the nasal passages, hyperhemic mucosa with voluminous turbinate; oropharynx: ahead; Diffuse erythema was found in the left malar region, sharp pain at the emergency pressure of the infraorbital branch of the fifth cranial nerve. In the imaging study, an X-ray of the paranasal sinuses or mentonasal plaque with an open mouth was observed: occupied left nostril; Radiopaque and hyperdense, elongated lesion implanted in the lateral lateral wall of the left maxillary sinus, with growth towards the lumen of the antrum (**Figure 1**). No CT was performed because this service was not available. A left maxillary sinus osteoma was diagnosed.

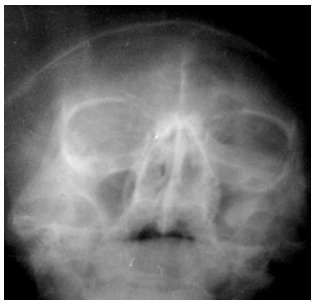

Figure 1: X-ray of paranasal sinuses: occupied left nostril; radiopaque, hyperdense elongated and pedunculated lesion implanted in the lateral lateral wall of the left maxillary sinus, with growth towards the lumen of the antrum.

An antrostomy of the left maxillary sinus was performed, fracturing an implantation pedicle osteoma in the lateral-external wall, drilling the implantation base, the rest of the normal mucosa (Figure 2). Pathological report: biopsy (B-16-472) that coincides with the presurgical diagnosis: spongy osteoma of the maxillary sinus, mucosa without cellular atypia.

Figure 2: Pedicled osteoma implantation in the lateral-external wall after antrostomy of the left maxillary sinus and being extracted in a single block.

Discussion

The age pattern is variable, with a certain predisposition for the male sex in a [1.5-2: 1] ratio, [8] although Oviedo QuirósJF6 states that there is no predilection for gender or age. In the present case, the osteoma was located in the maxillary sinuses, it is the second described in the province of Camagüey, [1] although the locations in this region are the least frequent [5]. According to Hernández Vila C, et al, [7] within the sinus cavities Most are found in the frontal sinus (58-68%), followed by the ethmoid, maxillary and sphenoid; Alister JP, et al, [5] mention that the location in the paranasal sinuses corresponds to 21%, being more recurrent in the frontal and maxillary sinuses and more infrequent in the ethmoid and sphenoid sinuses [9].

Unlike this patient, the finding is made by chance after an imaging study, of which 4 to 10% generate some clinical manifestation, which depends on the location, which can cause inflammation, facial asymmetry and obstruction of the tract nasofrontal or nasal level [7]. Most osteomas are asymptomatic, they have a long evolution, there is a long latency period until they are detected and the first symptoms are related to compression of neighboring structures. When they are in relation to the paranasal sinuses it can manifest with headache, neuralgia or paresthesia and in more advanced cases there can be ocular involvement; exophthalmia, diplopia or restriction of eye movement [5]. From the clinical point of view, the extension of these tumors produces a series of complications such as: obstructions, displacements, meningoencephalitis and orbital cellulitis, pain, depending on the location of the In question, 1 in the case studied, the present manifestation was pain in the malar region and redness in the area, which shows that the tumor has reached a certain volume capable of producing symptoms for which the patient seeks medical attention.

The etiology remains unknown, although [3] theories are postulated: osteogenic, infectious, or traumatic. It can also occur in patients with genetic diseases such as Gardner syndrome or familial adenomatous polyposis [7]. In this case there was a history of trauma. The imaging examination was decisive, it provides the key to the pre-surgical diagnosis, revealing the shape, volume and extension of the osteoma. A tumor mass of opacity greater than that of the surrounding bone structures can be observed, although not homogeneous and in places where they do not reach the limits of the sinus it is separated from them by a clear band corresponding to the normal remaining sinus cavity. With a profile scan, the size and erosion of the anterior or posterior wall of the sinus can be determined and recognized. Sometimes the osteoma is accompanied by osteoblastic changes in the lateral walls of the sinus with erosions due to infection [1].

Surgical treatment of sinus osteomas must be individualized. Although at present the endoscopic route is usually the first therapeutic option, on some occasions other types of approaches must be used depending on the location, the size of the tumor and the possible complications; [7] In symptomatic and rapidly progressive tumors, options include external, endoscopic, or a combination of approaches. The decision must be made based on location and size. Although the external approach has been recommended for complex cases due to anatomical difficulties [8].

In the present study of the osteoma of the maxillary sinus, the approach was external, the Caldwell-Luc technique or maxillary antrostomy was used, which consists of the approach to the maxillary sinus by vestibular route through the canine fossa, reaching the sinus through of a small window, open in the bone itself.10 As mentioned by Santana Álvarez Jorge1 in what is expressed by classical authors in the literature of the specialty, the gingivolabial incision that allows wide access to the antrum and surgery with aesthetic results.

From the histopathological point of view, this case turned out to be

classified as a spongy osteoma; Thompson Valentín E, et al, 11 suggest that these tumors can be spongy, compact, and eburine [1].

The evolution of the patient has been favorable. Mayta Jiménez M, et al, [3] report in their annual check-ups, that no type of recurrence is evidenced in the treated patients. Despite having a low probability of recurrence, long-term follow-up of these lesions is important, with periodic clinical and imaging examinations [5].

Conclusions

Osteoma in the maxillary sinus is a rare benign lesion. The clinical manifestations observed in this case were compression pain and redness of the malar region. The physical examination can occasionally show elements for the diagnosis as it was in the present case. The imaging examination performed made it possible to correctly plan the surgical intervention, reducing the risks of complications. The ideal approach for symptomatic voluminous osteoma is the Caldwell-Luc technique or antrostomy. The histopathological study confirmed the diagnosis.

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4. Acquisition of funds: not applicable

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