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Clinical case

Diagnostic and therapeutic strategies for an evolving large jugal lipoma: a comprehensive case study

Approche diagnostique et thérapeutique d'un lipome jugal volumineux évoluant depuis huit ans

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Résumé

Le lipome est la tumeur bénigne mésenchymateuse la plus fréquente dans les tissus mous, se caractérisant par la croissance localisée de cellules adipeuses.

Dans la cavité buccale, les lipomes se manifestent généralement sous forme de nodules sous-muqueux solitaires, bien définis, à croissance lente et indolores. Ils sont généralement facilement diagnostiqués sur le plan clinique, bien qu'il existe un risque de confusion avec d'autres néoplasmes de la cavité buccale.

Dans la région cervico-faciale, les lipomes représentent 13 à 20 % des cas, la région cervicale postérieure étant la plus fréquemment touchée.

Il s'agissait d'un homme de 45 ans, sans antécédents médicaux particuliers ayant consulté pour une tuméfaction jugale gauche en évolution lente et persistant depuis huit ans.

Un scanner a été réalisé, ne montrant aucun signe d'infiltration. Une excision chirurgicale a été effectuée et l'examen histopathologique a confirmé le diagnostic de lipome.

Les lipomes infiltrants nécessitent une attention particulière, et il est recommandé de les retirer avec une marge de tissu sain pour réduire le risque de récidive et garantir l'ablation complète de la tumeur.

Mots-clés : Lipome, Cas clinique, Bénin, Inesthétique, Afrique subsaharienne.

Abstract

Lipoma, the most common benign mesenchymal neoplasm in soft tissues, is characterized by the localized growth of fat cells.

In the oral cavity, lipomas typically present as well-defined, slow-growing, solitary submucosal nodules that are painless. They are generally easily diagnosed clinically, although there is a possibility of confusion with other neoplasms in the oral cavity

In the cervicofacial area, lipomas account for 13% to 20% of cases, with the posterior cervical region being the most frequently involved.

A 45-year-old male patient with an unremarkable medical history presented with a slowly evolving left jugal swelling that had been persistent for eight years. CT scan performed without any sign of infiltration. Surgical excision was done and histopathological exam has confirmed a lipoma.

Infiltrative lipomas require particular attention, and it is advisable to remove them with a margin of healthy tissue to prevent recurrence. This strategy aims to ensure complete removal of the tumor and reduce the risk of its return.

Keywords: Lipoma, Case report, Benign, Unesthetic, Sub-Saharan Africa.

Introduction

Lipoma, the most common benign mesenchymal neoplasm in soft tissues, is characterized by the localized growth of fat cells [1–5].

It was initially described as "yellow epulis" by Roux in 1848, while oral lipomas were first documented by MacGregor and Dyson in 1966 [4,5].

In the oral cavity, lipomas typically present as well-defined, slow-growing, solitary submucosal nodules that are painless. They are generally easily diagnosed clinically, although there is a possibility of confusion with other neoplasms in the oral cavity [2].

Lipomas tend to exhibit slow growth and usually do not cause symptoms [6]. These tumors can affect various sites within the oral cavity, including the tongue, lips, gingiva, floor of the mouth, salivary glands, and oral mucosa [1].

A literature review conducted between 1970 and 2001 identified 46 cases of oral lipomas, accounting for 0.5% of all oral tumors. The most common sites affected were the jugal mucosa (45.7%), tongue and lips (13%), and floor of the mouth (10.9%) [5]. In the cervicofacial area, lipomas account for 13% to 20% of cases, with the posterior cervical region being the most frequently involved [5].

Clinical case

A 45-year-old male patient with an unremarkable medical history presented with a slowly evolving left jugal swelling that had been persistent for eight years. The swelling was asymptomatic, causing no pain, tenderness, or changes in facial sensation (image 1).

Upon examination, clear facial asymmetry due to the left jugal swelling was observed. The swelling was painless, resilient, and palpable, affecting both the superficial and deep tissue planes. The patient exhibited fair oral hygiene and had incomplete permanent dentition. No other abnormalities were detected during the examination.

Radiological examination using computed tomography (CT) revealed a hypodense mass with fatty density measuring 53x37x66 mm, demonstrating no evidence of invasion or bone lysis. Based on these findings, a preliminary diagnosis of a benign cheek tumor was made (image 2 and 3).

The therapeutic approach for this case involved surgical excision under general anaesthesia. The intraoral route was selected as the surgical access point. The entire surgical specimen was meticulously removed during the procedure, ensuring complete resection. The postoperative course was uncomplicated, and the patient experienced a smooth recovery without any adverse events or complications.

A macroscopic fragment of the lipoma was subjected to histological examination. The fragment measured 70x45x30 mm and displayed a well-encapsulated and resilient consistency. Upon sectioning, a yellowish appearance with areas of haemorrhage was noted. Microscopic analysis revealed a proliferation of mature adipose cells forming lobules, which were separated by delicate connective tissue trabeculae. The histological findings were consistent with a mature lipoma, demonstrating no signs of malignancy.

Image 1: Clear facial assymetry and cheek swelling exhibited.

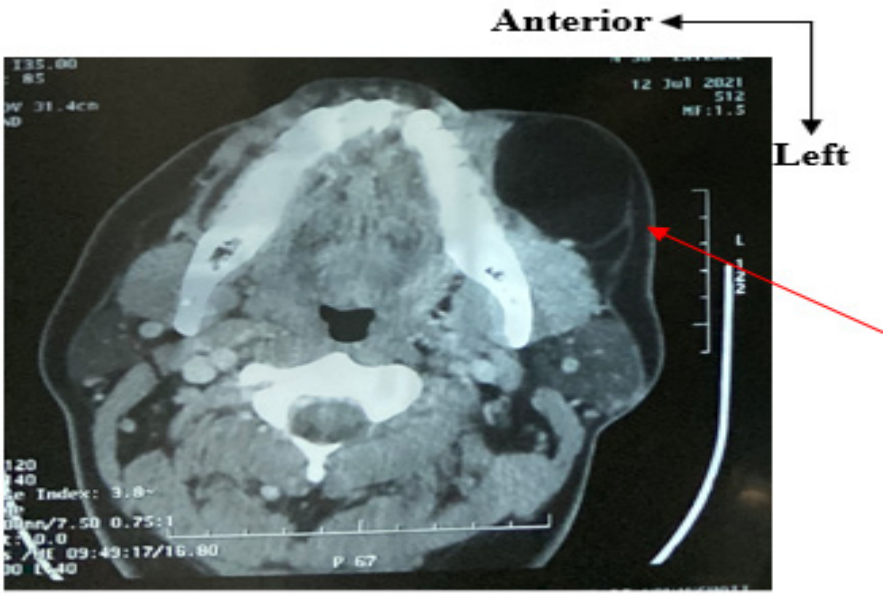

Image 2: CT scan emphasized hypodense image on left jugal area (axial section).

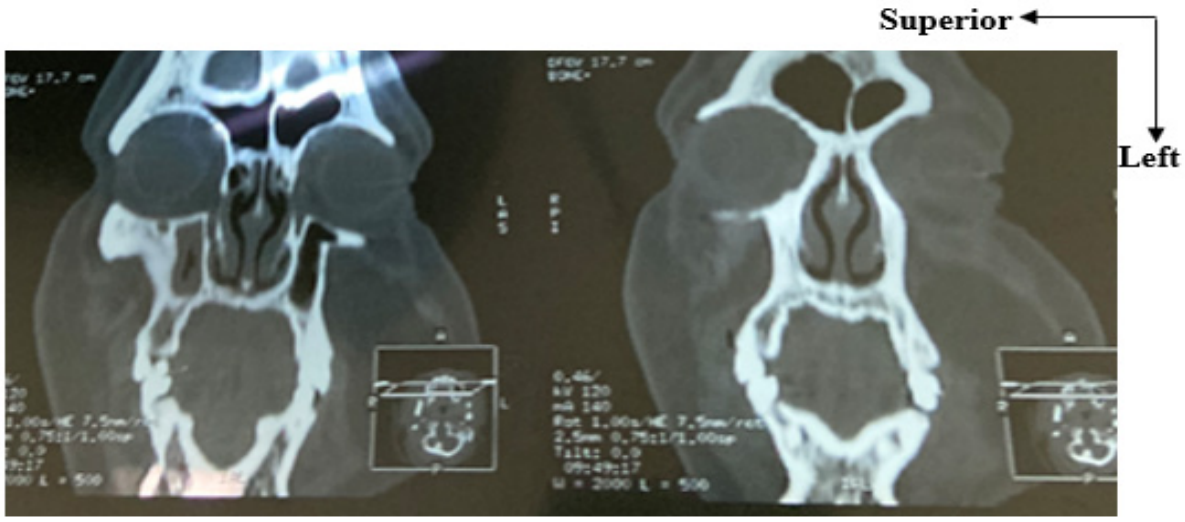

Image 3: Left jugal hypodense image appeared as a well-defined and encapsulated mass (Frontal section).

Image 4: Visual characteristics of the lesion during surgery.
Intra-oral incision
Dissection of lipoma
Immediate postoperative appearance
after lipoma removing

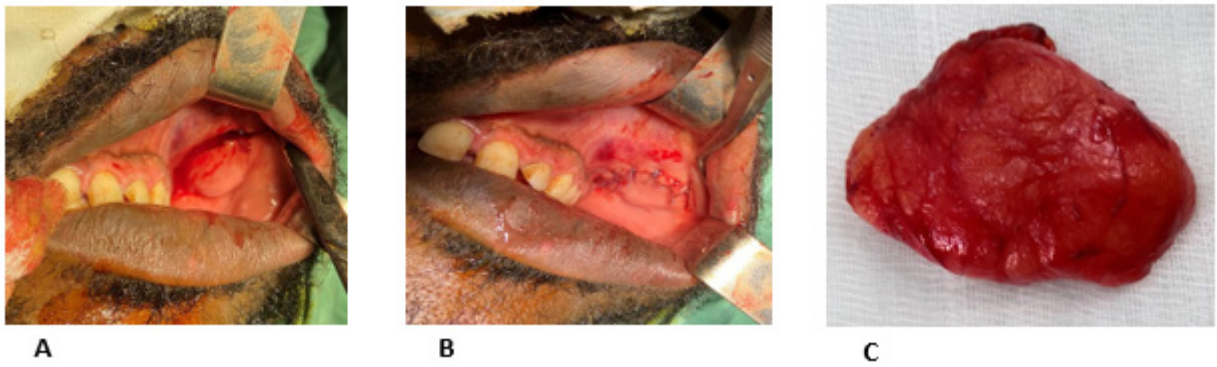

Image 5: Revision and suture of jugal flap.
Hemostasis and flap coaptation
Suture done
Surgical specimen

Discussion

An oral lipoma is a noncancerous growth that originates from mesenchymal tissue and can develop in various parts of the body. Typically, the diagnosis of oral lipomas is more prevalent among adults aged between 40 and 60 years old according to world health organisation (WHO) [3]. Studies have shown that lipomas occurring in the oral cavity have a relatively similar distribution between genders [4,7]

Oral lipomas have been observed to occur in different regions of the oral cavity, with the following prevalence rates in descending order: 1) jugal mucosa (31-66%), 2) tongue (10-31%), 3) lower lip (8-21%), and 4) floor of mouth (5-22%) (4). In the presented clinical case, the lipoma was located in the jugal mucosa, which aligns with the most common site for oral lipomas.

Lipomas occurring in the oral cavity can affect both the function and appearance of the patient's oral cavity. Therefore, they are typically diagnosed through clinical observation [4].

The lipoma in this clinical case had been progressing for a duration of eight years. The patient was encouraged by their neighbors to seek medical advice. The lipoma's dimensions, measuring 70x45x30 mm, were consistent with the findings documented in existing literature, which also reported lesions ranging from 8.0 to 11 cm in diameter [4].

When lipomas occur inside the oral cavity, they can cause significant discomfort to the patient, along with aesthetic, depending on the specific area affected [3]. In the case of our patient, it was not only the aesthetic problem that was present, but the lipoma also interfered with the function of the oral cavity. This was because the lipoma primarily developed in the jugal area, impacting the normal functioning of the oral cavity.

The exact cause of its development is still not well understood, and it is not related to lipid metabolism or diet [3]. In the case of our patient, no specific underlying cause was suspected, as there was no history of trauma, infection, hereditary factors, or any other known etiology.

The diagnosis of lipomas is typically made based on clinical observation, and it is further confirmed through a biopsy [4]. The potential differential diagnoses encompass ranulae, epidermoid cysts, pleomorphic adenomas, and fibromas [8].

Medical ultrasound is a valuable tool for characterizing and monitoring typical superficial lipomas [3]. Due to its easy accessibility and cost-effectiveness, ultrasound is often the initial choice for examination [3]. In cases where deeper infiltration into bone tissue is suspected, CT scans can provide essential information regarding

the lesion's nature, helping to assess its potential malignancy [3]. In this particular case, a CT scan was conducted, and the results showed no evidence of infiltration into the surrounding tissues. This finding suggests that the lipoma is localized and non-invasive, which is a favorable characteristic indicating a benign nature of the lesion.

Lipomas in the oral cavity are usually treated with conservative local removal, and recurrence is uncommon [7,8]. Research has demonstrated that there are no significant differences in prognosis among the major histopathological types of lipomas [7]. However, intramuscular lipomas are an exception, as incomplete surgical excision can lead to higher recurrence rates [7]. In cases of infiltrative lipomas, it is recommended to remove them with a margin of healthy tissue to prevent recurrence [4,6] . This approach aims to ensure complete removal of the tumor and reduce the risk of its return.

Although microscopical lipoma can be categorized into various subtypes, the histopathological characteristics of the lesion are distinct. A typical lipoma is typically a well-defined, non-encapsulated collection of mature adipocytes with abundant and clear cytoplasm, without any signs of cellular atypia or metaplasia. These histopathological findings align with the results of our study [6].

Conclusion

Lipomas in the oral cavity are typically diagnosed through clinical examination and histopathological analysis, with potential differential diagnoses considered. Medical ultrasound serves as a valuable tool for the characterization and follow-up of superficial lipomas due to its easy accessibility and cost-effectiveness. CT scans are essential for determining the infiltrative nature of the lesion in bone tissue and can provide crucial information regarding its potential malignancy.

Conservative local removal is the standard management approach for oral lipomas, with a low recurrence rate observed in most cases. Studies have shown that there are no significant differences in prognosis among the major histopathological types of lipomas, except for intramuscular lipomas, which may present higher recurrence rates if incompletely excised.

Infiltrative lipomas require particular attention, and it is advisable to remove them with a margin of healthy tissue to prevent recurrence. This strategy aims to ensure complete removal of the tumor and reduce the risk of its return.

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Conflict of interest : None

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