Therapeutic management of a long-term large oral lipoma: reports of two clinical cases

Manejo terapêutico a longo prazo de grande lipoma oral: relato de dois casos clínicos

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ABSTRACT
This study aims to report two cases of female patients with large lipomas in the oral cavity. The first patient presented a floating, mobile, and asymptomatic lesion in the right submandibular region, with an evolution span of approximately 30 years. Such extensive development time has led to a rare large size of this type of lesion. The treatment choice was total surgical excision of the lesion. The material was sent for histopathological analysis, with subsequent confirmation of lipoma. In the second case, the patient sought specialized care due to a complaint about a soft swelling lesion her mouth. In the intraoral clinical examination, a volume resulting from an extensive submucosal nodular lesion was observed, located in the buccal region, with sessile base, soft to palpation, and measuring approximately 5 cm in its largest diameter. An excisional biopsy was chosen for treatment. Both patients have a mean time of 15 months of postoperative follow-up, with no evidence of recurrence of the lesions.

Key words: Oral pathology, lipoma, oral cavity.

RESUMO
Este estudo tem como objetivo relatar dois casos de pacientes do sexo feminino com grandes lipomas na cavidade oral. O primeiro paciente apresentou lesão flutuante, móvel e assintomática na região submandibular direita, com evolução de aproximadamente 30 anos. Esse tempo extenso de desenvolvimento levou a um tamanho raro e grande desse tipo de lesão. A escolha do tratamento foi a excisão cirúrgica total da lesão. O material foi enviado para análise histopatológica, com posterior confirmação do lipoma. No segundo caso, a paciente procurou atendimento especializado devido a uma queixa de lesão inchada na boca. No exame clínico intraoral, observou-se um volume resultante da extensa lesão nodular da submucosa, localizado na região bucal, com base séssil, sensível à palpação e medindo aproximadamente 5 cm em seu maior diâmetro. Uma biópsia excisional foi escolhida para o tratamento. Ambos os pacientes têm um tempo médio de 15 meses de acompanhamento pós-operatório, sem evidência de recorrência das lesões.

Palavra-chave: Fibroma Ossificante Juvenil, Patologia Bucal, Cirurgia.

1 INTRODUCTION
Lipoma is a benign fatty tumor, which represents the most common mesenchymal neoplasm, occurring in the torso and in proximal portions of body extremities. (Dattilo DJ, Ige JT, Nwana EJC, 1996) Lipomas are usually presented as slow-growing, asymptomatic lesions, generally surrounded by a fibrous capsule. They are more prevalent in men, between the third and fifth decade of life, and are rarely found in children. (Motagi A, Aminzadeh A, Razavi SM, 2012) They are widely variable in size, and most are smaller than 3 cm. (Dattilo DJ, Ige JT, Nwana EJC, 1996; Motagi A, Aminzadeh A, Razavi SM, 2012) The etiology is uncertain; however, some authors suggest heredity, local infection, hormonal changes, and trauma as main causal factors. (Capelani MM, et al, 2007; Buric N,
et al, 2001) They are less frequent in the mouth region, comprising no more than 5% of all lipomas. (Nayak S, Nayak P, 2011) Less common sites of occurrence include the tongue, floor of the mouth, and lips. (Dattilo DJ, Ige JT, Nwana EJC, 1996; Epivatianos A, Markopoulos AK, Papanayonou P, 2000)

Diagnosis of this lesion is predominantly by clinical evaluation. However, use of imaging tests such as computed tomography, magnetic resonance imaging and ultrasonography may help with the differential diagnosis. (Hoseini AT, Razavi SM, Khabazian A, 2010) Macroscopically, the lesions are yellowish in color. (Dattilo DJ, Ige JT, Nwana EJC, 1996; Gulia J, et al, 2012; Chidzon MM, Mahomya L, Marimo C, 2006) Microscopically, they are composed of mature adipocytes, which differ little from surrounding normal adipose tissue. (Dattilo DJ, Ige JT, Nwana EJC, 1996; Capelani MM, et al, 2007; Epivatianos A, Markopoulos AK, Papanayonou P, 2000) Lipomas can be treated by several techniques, and recurrences are rare. (Dattilo DJ, Ige JT, Nwana EJC, 1996; Motagi A, Aminzadeh A, Razavi SM, 2012; Mahabir RC, Mohammad JA, Courtmanche DJ, 2000) It is of interest to demonstrate techniques of local excision of oral lipomas to teach dentists the correct procedure and care that should be taken to conclude such cases successfully.

Thus, the aim of this study is to report a series of clinical cases describing the treatment of long-term large lipomas in the oral cavity, as well as the surgical procedure and patient follow-up.

2 CASE REPORT

2.1 CLINICAL CASE 1

Patient M.G.S. (57 years old, caucasian, female) sought the Oral-Maxillofacial Surgery and Traumatology Service at public hospital, complaining of an increase in volume in the right cheek. During anamnesis, she did not report any systemic alterations, and reported that the lesion has been increasing progressively for over 30 years.

Upon physical examination, the lesion was shown to be soft in consistency, floating, mobile, asymptomatic, measuring approximately 7 cm at greatest diameter, in the submandibular region on the right side (Figs. 1 A, B). Upon intraoral examination, the covering mucosa was normochromic, with the bottom of the vestibule remaining unchanged in the region of the right lower premolars and molars.

Computed tomography, in a coronal cut with a window to soft tissue, revealed an extraosseous lesion with well-defined contours, cystic appearance and, according to Hounsfield density, suggestive of fat (Fig. 1 C).
The treatment options were incisional biopsy, aspiration puncture or excisional biopsy. Although more invasive, the last option was the one chosen, since the lesion had all the clinical characteristics of a lipoma, for which the most suitable treatment is excisional biopsy.

The patient was then submitted to general anesthesia, with orotracheal intubation, to perform excisional biopsy of the lesion. Surgical access was through a submandibular incision on the right side, and dissection of the skin and subcutaneous tissue until visualization and complete exposure of the lesion. The lesion was dissected across its length and removed in its entirety (Fig. 1 D). The surgical specimen was conserved in 10% formaldehyde solution, and it was observed that the lesion floated because the adipose tissue density was less dense than formaldehyde, followed by histopathological examination (Fig. 1 E). The histopathological examination revealed a large number of mature adipocytes, the diagnosis of which was compatible with lipoma (Fig. 1 F). There were no immediate or late postoperative complications. The patient remained under postoperative follow-up for 12 months, without any recurrence of the lesion.

Figure 1. A – Bottom view of initial stage of the patient from case one. B – Frontal view of situation prior to surgery. C – Computed tomography of patient in coronal section. D - Surgical piece removed. E – Surgical piece fixed in 10% formol depicting flotation. F - histological lipoma confirmed after hematoxylin–eosin histological analysis.

2.2 CLINICAL CASE 2
In second case, patient A.L.T.S. (53 years old, brown-skinned, female) sought the Oral–Maxillofacial Surgery and Traumatology Service another of University Hospital, complaining of a soft swelling in her mouth. During anamnesis, she did not report any systemic changes and stated that the lesion has been slowly increasing for around 4 years. Upon physical examination, a volume resulting from an extensive submucosal nodular lesion located in the buccal vestibule region was observed, next to teeth 34 and 35. With palpation, the lesion exhibited a sessile base and soft consistency, and measured approximately 4 cm at its largest diameter (Figs. 2 A, B).

Again, the treatment options were either incisional biopsy, aspiration puncture, or excisional biopsy. Although more invasive, the last option was the chosen, since the lesion had all the clinical characteristics of a lipoma, for which the most suitable treatment is excisional biopsy. The patient was then submitted to local anesthesia (20 mg/ml Mepivacaine Hydrochloride with 0.01 mg/ml epinephrine), which was injected by means of the inferior and infiltrative alveolar block anesthetic technique in the periphery of the lesion, because this favors containment of bleeding for excisional biopsy of the lesion.

Surgical access was through a linear incision on the lesion; the tissues were separated around the fibrous capsule and the lesion was pinched and removed (Figs. 2 C, D). The surgical specimen was conserved in 10% formaldehyde solution (it was observed the specimen floated) and was then sent for histopathological examination (Fig. 2 E). In the histopathological examination, macroscopy was performed in formaldehyde, whereby an elastic nodule of brownish tissue was found, measuring 4.0 x 2.5 x 1.4 cm; after cutting, a compact and yellowish surface was observed. In microscopy, a benign mesenchymal neoplasm was observed, surrounded by a thin capsule and consisting of mature adipocytes, thus diagnosing a lipoma (Fig. 2 F). There were no immediate or late postoperative complications. The patient remained in postoperative follow-up for 18 months, without any recurrence of the lesion. Both patients were in clinical follow-up for a mean time of 15 months without any evidence of recurrence of the lesions, demonstrating that the surgical procedure was completely successful.
Figure 2. A – Frontal view of initial face situation of case two. B – Intraoral image of the patient at initial stage. C – Surgical exposure of lipoma. D – Surgical box after removal of lipoma. E – Surgical piece fixed in 10% formol depicting flotation. F – histological confirmation of lipoma by means of hematoxylin–eosin aided histological analysis.

Source: Author

3 DISCUSSION

Lipomas are commonly slow-growing lesions, with no painful symptomatology, presenting a sessile or pedunculated base, single or lobulated, and are usually surrounded by a fibrous capsule. (Dattilo D, Ige JT, Nwana EJC, 1996; Capelani MM, et al, 2007) It is believed that oral lipomas tend to occur with equal predilection for involvement in men and women. The mean age of intra-oral lipoma varies according to different studies, but often occurs in the fourth and fifth decades of life. (Nayak S, Nayak P, 2011; Gulia J, et al, 2012) Large lipomas have been shown to cause dentofacial deformities. (Motagi A, Aminzadeh A, Razavi SM, 2012) They can be found in any region of the oral cavity, with the buccal mucosa being the region of greatest predilection, accounting for around 50% of the cases, followed by the tongue, buccal groove, floor of the mouth, and lips. (Hoseini AT, Razavi SM, Khabazian A, 2010; Gulia J, et al, 2012) They can also have an unusual location, such as in the facial spaces.
In some cases, lipomas may be present in cases of congenital abnormalities or syndromes. There is also a report of the presence of intra-oral lipomas in the lingual region related to a variant of type II oral-facial-digital syndrome, and an extremely rare form of lipoma, associated with the cleft palate. (Del Castillo-Panda VJL, Cebrian-Carretero JL, Gomez-Garan E, 2004) Briefly speaking, the color may range from normal mucosa to pink, and some may be in the form of a yellowish mass. (Neville BW, et al, 2016)

Because lipomas are asymptomatic, patients with oral lesions, depending on their location, normally seek treatment only when they present phonetic, masticatory, or aesthetic disorders, which: Lipomas may also interfere with the adaptation of prostheses. (Buric N, et al, 2001; Epivatianos A, Markopoulos AK, Papanayonou P, 2000) The differential diagnosis of lipoma includes: glandular lesions, neurofibroma, and granuloma, among others. In the case of the intraosseous variant, preliminary aspiration puncture helps in the differential diagnosis to cystic lesions. (Nayak S, Nayak P, 2011; Epivatianos A, Markopoulos AK, Papanayonou P, 2000; Noro GA, et al, 2010) A case of congenital lipoma was described in a 7-year-old boy in the upper lip frenum. (Resente R, Meirelles M, Varella R, 2013) Histologically, lipoma is similar to adipose tissue, but its metabolism is independent, because tumor cells have more intense metabolism than adipose cells. Several histological variants have been described, such as spiny-cell lipoma, pleomorphic lipoma, angiolipoma, spindle-cell lipoma, intramuscular lipoma, myxoid lipoma, and fibrolipoma, which is the most common. There may also be chromosomal aberrations causes, such as translocations involving 12q13-15, interstitial deletions of locus 13q and rearrangements involving locus 8q11-13. (Pardhe N, Singh N, Bharadwaj G, Nayak PA, 2013) Immunohistochemistry has been used for differentiation between benign and malignant tumors of adipose tissue, with detection of aP2, a protein expressed by lipoblasts. (Noro GA, et al, 2010) Immunocytochemical studies with CD34, bcl-2,21,24 can aid in the differentiation of lipomas from other myxoid lesions. (Ponce JB, Ferreira GZ, Santos PSS, Lara VS, 2016) However, immunohistochemistry was not performed on our patients due to financial restrictions and the histopathological diagnosis defined, according to the clinical findings.

Imaging tests aid in the diagnosis of the lesion. (Dattilo DJ, Ige JT, Nwana EJC, 1996; Del Castillo-Panda VJL, Cebrian-Carretero JL, Gomez-Garan E, 2004) The rate of recurrence after excision is low; infiltrative lipomas tend to recur after inadequate excision due to the fact that they are not encapsulated like simple lipomas are. (Resente R, Meirelles M, Varella R, 2013) Malignant transformation is rare and has been reported, especially with intramuscular lipomas. Thus, lipomas should be removed completely. (Segundo AV, Valverde RS, Filho RCL, Leão JC, 2004)

4 CONCLUSION
Patients generally do not seek treatment for oral lipoma because they are most often asymptomatic and may be observed during routine oral examination. Although the characteristics of lipoma are simple and straightforward, precise clinical and surgical information along with histopathological examination are the bases of the definitive diagnosis thereof.

Although lipoma is a benign neoplasm of low prevalence in the oral cavity, it is the dental surgeon’s role to perform the differential diagnosis and treatment of choice, which is principally excisional biopsy, in order to guarantee the patient’s comfort, welfare, and quality of life.

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REFERENCES

1. Dattilo DJ, Ige J T, Nwana E J C. Intraoral lipoma of the tongue and submandibular space. J Oral Maxillofac Surg 1996; 54:915-7.
2. Motagi A, Aminzadeh A, Razavi SM. Large oral lipoma: Case report and literature review in Iran. Dent Res J (Isfahan). 2012; 9:350-2.
3. Capelani MM, Mazola C, Filho JLT, Azenha MR, Pereira LC, Bounpensiere SG. Extenso lipoma na cavidade bucal associado ao plexo vásculo – nervoso mentual. Rev. Bra de Cir e Trau Buco-Max-Fac 2007; 4:95-97.
4. Buric N, Krasic d, Visnjic M, Katic V. Intraosseous mandibular lipoma: A Case Report and Review of the Literature. J Oral Maxillofac Surg 2001; 59:1367-1371.
5. Nayak S, Nayak P. Lipoma of the oral mucosa: A case report. Arch Orofac Sci 2011:637-9.
6. Epivatianos A, Markopoulos A K, Papanayonou P. Benign tumors of adipose tissue of the oral cavity: a clinicopathologic study of 13 cases. J Oral Maxillofac Surg 2000; 58:1113-17.
7. Hoseini AT, Razavi SM, Khabazian A. Lipoma in oral mucosa: Two case reports. Dent Res J (Isfahan) 2010; 7:41-3.
8. Gulia J, Yadav S, Rana P, Singh S, Duhan A, Sen R, Hooda A. Lipoma Oral Cavity: A Case Report With Review Of Literature. The Internet Journal of Otorhinolaryngology. 2012;14(1):1-4.
9. Chidzonga MM, Mahomva L, Marimo C. Gigantic tongue lipoma: A case report. Med. oral patol. oral cir.bucal 2006;11:437-439.
10. Mahabir RC, Mohammad JA, Courtmanche DJ. Lipoma of the cleft soft palate: a case report of a rare congenital anomaly. Cleft Palate Craniofac J 2000; 37:503-505.
11. Del Castillo-Pando de VJ L, Cebrian–Carretero J L, Gomez-Garan E. Chronic lingual ulceration caused by lipoma of the oral cavity. Med Oral 2004; 9:163-167.
12. Neville, B.W.; Damm, D.D.; Allen, C.M.; Bouquot, J.E. Patologia Oral e Maxilofacial. Trad.3a Ed., Rio de Janeiro: Elsevier, 2016, 525p.

13. Noro Filho GA, Caputo BV, dos Santos CC, Souza RS, Giovani M, Scabar LF, et al. Diagnosis and treatment of intraoral lipoma: A case report. J Health Sci Inst 2010;28:129-31.

14. Resende R, Meirelles M, Varella R. Removal of a giant lipoma: Case report. Rev. Cir. Traumatol. Buco-Maxilo-Fac., Camaragibe. 2013;13(2):37-42.

15. Pardhe N, Singh N, Bharadwaj G, Nayak PA. Spindle cell lipoma. BMJ Case Rep 2013; 2013:1-6.

16. Ponce JB, Ferreira GZ, Santos PSS, Lara VS. Giant oral lipoma: a rare entity. An Bras Dermatol. 2016; 91(5 Supl1):84-6.

17. Segundo AV, Valverde RS, Filho RCL, Leão JC. Fibrolipoma de assoalho de seio maxilar: Relato de caso Rev. Bra de Cir e Trau Buco-Max-Fac 2004; 4:237–240.