DERMOIDE CYST IN FLOOR MOUTH

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ABSTRACT

Dermoid cysts are uncommon cystic lesions in the head and neck region (2% of all desmoid cysts), with a higher prevalence in young people, with no gender preference. It is considered a form of benign cystic teratoma derived mainly from the embryonic germinal epithelium containing attached structures on your wall, as sebaceous glands, sweat and hair follicles, classifying it as a development cyst. This article aims to inform clinical and histopathological aspects of dermoid cyst and report a clinical case treated surgically in the anterior mouth floor in the midline. The patient came in Oral and Maxillofacial Surgery Service of the Federal University of Rio de Janeiro (UFRJ), where he was treated with surgical excision in the midline of the mouth floor under general anesthesia. Due to the process of evolution of the lesion and the size that can achieve early diagnosis and surgical treatment become imperative to improve the patient's condition. The location of the lesion relative to mylohyoid andgeniohyoidmuscles is very important to determine the surgical approach that will provide the best treatment. Once the complete excision of the lesion, the recurrence becomes rare.

KEYWORDS: Dermoid cyst, cysts, oral pathology, odontogenic.

1. INTRODUCTION

The dermoid cyst is a cystic malformation of the unusual development. It is lined with epithelium similar to the epidermis, and the wall contains skin appendages. Generally can be considered is a benign cystic teratoma of the way. By definition, a true teratoma is a tumor development comprises tissue derived from the three germ layers: (A) ectoderm, (B) and mesoderm (C) endoderm[1].

In 1955, Meyer updated the concept of dermoid cyst to describe three histological variants, true dermoid cyst, epidermoid and teratoid cyst[2]. Dermoid cysts are simpler in structure than the complex teratomas. Although not contain tissue of the three germ layers, probably represent a failed form of teratoma. In the oral cavity can be observed similar cysts coated by epithelium identical to the skin, but skin appendages are not observed in the cyst wall[1].

They are coated by stratified squamous epitheliumorthokeratinized, with a prominent granular layer. It is common to find abundant keratin inside the cyst light. The cyst wall is composed of fibrous connective tissue that contains one or more skin appendages, such as sebaceous glands, sweat glands or hair follicles[1].

Can be found most often in the midline of the oral floor, a sublingual swelling can move the tongue superiorly and cause difficulties in feeding, speech or even breathing. The cysts that appear above the genius-hioideo muscle produce, often a submental swelling, with appearance of "double chin". They are more common in children and young adults; 15% of the reported cases are congenital[1].

In general, the lesion grows slowly without causing pain, presenting itself as a rubber-mass or paste, which often retains the imprint of fingers under finger pressure. Secondary infection may occur, and the lesion can drain into the oral cavity or the skin[1].

For diagnosis and delineate the extent of the injury, can be used as the tests: Ultrasound, Computed Tomography, Magnetic Resonance, Histopathological and X-rays.

Surgical removal is indicated in these cases, those located above the geniohyoid muscle can be removed by intraoral incision. It has recurrence is unusual. And there are few reported cases where there was a malignant transformation into squamous cell carcinoma.

2. CASE REPORT

The male patient, 15 years old, leucoderma, came in Oral and Maxillofacial Surgery Service of the Federal University of Rio de Janeiro (UFRJ). Complaining about "a ball under the tongue" (Figure 1). During inspection and palpation of the head and neck showed a swelling on the floor of the mouth, in the anterior region, in the

midline, with pinkish-yellowish color and intact mucosa.

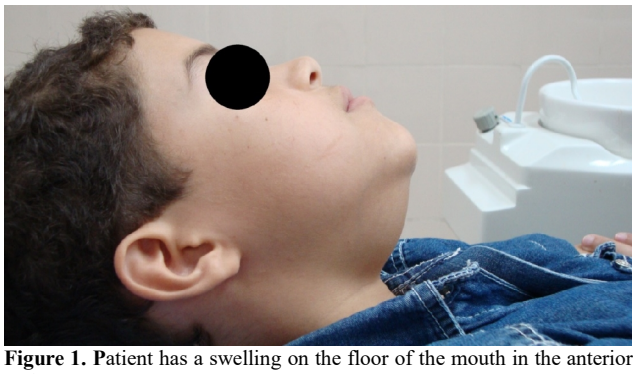

Figure 1. Patient has a swelling on the floor of the mouth in the anterior region

Figure 2. In the image oral Intra the patient has a sublingual mass.

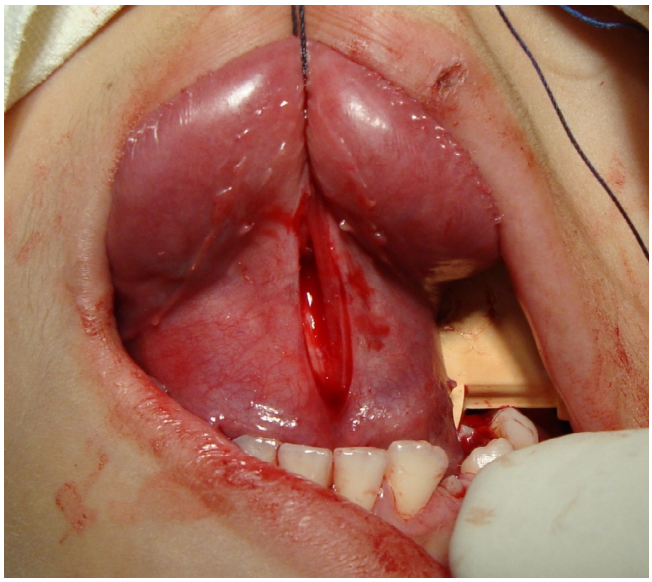

Figure 3. In the surgical procedure an incision was made in the midline to access the cyst.

The injury became more evident when the tongue was lifted; to the palpation, showed soft and painless consistency (Figure 2). It presents dysphagia and discomfort to sleep. The clinical diagnosis was: dermoid cyst. The patient was treated with surgical excision in the midline of the mouth floor under general anesthesia (Figure 3). It was performed total excision of the lesion which makes extremely rare the recurrence (Figure 4).

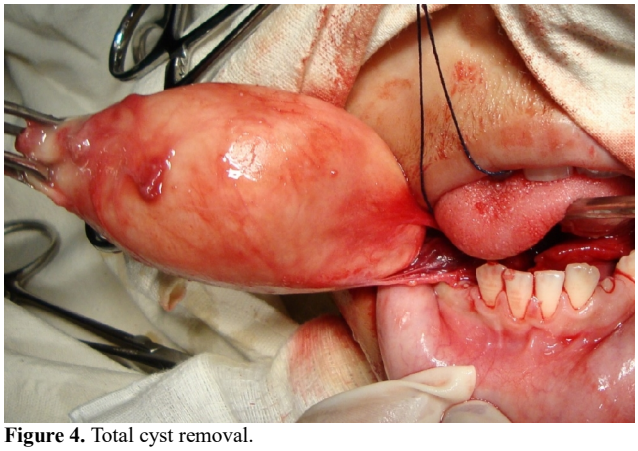

Figure 4. Total cyst removal.

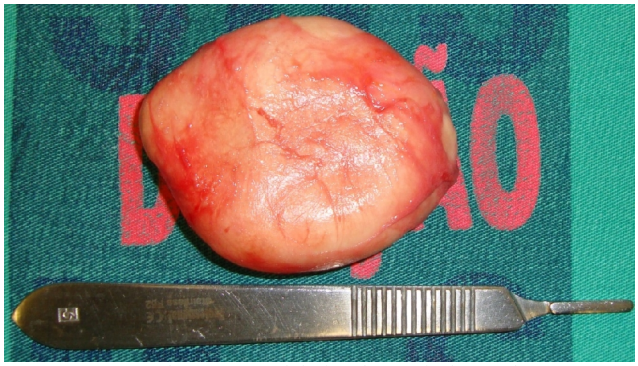

Figure 5. Large volume removed during the surgical procedure.

Histopathological examination confirmed the initial diagnosis (Figure 5).

The patient was followed by a two-year period and did not present relapse (Figure 6).

3. DISCUSSION

The origin of dermoid cyst of mouth floor, like other developing cysts is controversial. Two theories have been proposed: congenital and acquired. Congenital theory is that these cysts are derived from cellular debris, trapped during the closing of the average of the first line and second bilateral brachial arches. The theory proposes that the cysts are acquired, they say they can be derived from a traumatic or iatrogenic including epithelial cells or occlusion of the sebaceous gland duct[3,4].

The majority of cases occur between the ages of 15 and 35, with a slight male predilection. Authors reported sudden increases in volume at puberty, related to increased

sebum secretion[8]. For oral lesions, the floor of the mouth in the midline is the most common site. Injuries were also reported in the buccal mucosa, tongue, lips[4, 5].

Figure 6. Postoperative.

Anatomically the cysts in the floor of the mouth can be further classified as: sublingual (located above muscle genius-hyoid), submental (located between geniohyoid and milohyoid) and submandibular gland (located on the side of the floor of the mouth).

Histologically, the cysts were divided into the following types of Meyer in 1955:

• Dermoid Cyst True: They are coated by keratinized stratified squamous epithelium with dermal appendages on the wall of connective tissue. The lumen contains keratin, sebum and varying amounts of hair and fat

• Squamous cyst: They are coated by simple squamous epithelium, with fibrous wall and there is no dermal appendages. The cystic cavity lacks sebum or hair. These cysts develop from the top of the pilosebaceous unit

• Cyst teratoid:. They are covered with keratinized squamous epithelium ranging from respiratory pseudostratified columnar epithelium with dermal appendages the wall of the connective tissue, along with derivatives from all three germ layers (ectoderm, mesoderm and endoderm)[2,5,6].

The differential diagnosis for this cyst includes ranula, sialolithiasis ducts of submandibular glands thyroglossal duct, cyst of brachial cleft mouth floor cellulitis, schwannoma, lipoma, lymphangioma etc[5,7].

Lipoma is a benign tumor of slow growth, with intraoral incidence as low as 1%. Unavailability for lipid metabolism, together with the autonomous growth of a lipoma, made him a true neoplasm[17]. Cysts of gill slit are developmental abnormalities that arise from incomplete closure of gill arches. They usually appear in relatively young patients as floating bumps previously located the sternocleidomastoid muscle[18].

The sublingual gland cyst, in the aspiration gets content mucus, while dermoid cyst content is thick, pasty, granular and whitish. The lymphangioma is usually a cystic mass insinuating multilocular. Thyroglossalductcysts arise from remnants of the embryonic thyroid. They normally present in the midline in close contact with the hyoid bone, often producing a characteristic movement during swallowing, it has a unilocular cystic mass that can mimic an epidermoid cyst when it is in a supra-hyoid location and the back of the tongue root ; however, it does not have complex elements (without fat or calcifications)[19].

Infections and inflammatory lesions of perioral tissues may also present as a swelling of the submandibular area extending into the floor of the mouth. Acute infections may derive from an odontogenic source of infection, but they were not considered in the differential diagnosis, because of the chronic nature of the disease. In addition, fever, malaise and pain usually accompany the clinical picture of an acute infection, and tenderness and overlying fixed or fluctuant skin would be apparent on clinical examination[20].

Injury in salivary glands are commonly seen intraoral and in the submandibular triangle. The ranula is located exclusively in the mouth floor. It appears as an extension to the normal blue color, ranging from a floating process for a soft consistency injury, depending on the thickness of the overlying tissue. Children and young adults are most frequently affected.

Another diagnosis to consider is lymphadenitis by different causes. Submandibular lymph nodes may be commonly affected by cat scratch disease, tuberculosis (scrofula), or actinomycosis[21]. It is important to analyze the patient's medical history to rule out the possibility. Furthermore, lymphadenitis typically does not produce this degree of intraoral swelling.

Inflammatory diseases of the salivary glands as: acute sialoadenitis submandibular gland usually presents with swelling associated with meals, pain and pus from Wharton and chronic sialadenitis duct runs a protracted course of remissions and exacerbations. Both conditions are more frequent in the sixth decade of life and have no gender preference. Moreover, both conditions usually involve a number of predisposing factors such as sialolithiasis, chronic disease, hospitalization, or drugs, which may be associated with xerostomia[22].

Malignant tumors of the soft tissues were considered to be a remote possibility. The rapid growth, lack of division, adjacent mounting structures, and ulceration of the mucosa that overlap are common features of malignancy were observed in this patient.

The definitive diagnosis is provided by histological sample. The imaging exams may aid in the diagnosis[7]. The

ultrasound is the anechogenic cystic mass. A liquid fat-line with fluid and/or a floating mass are suggestive. Computed tomography is the unilocular mass of thin-walled, with fat content. The low amount of fluid, moving with position change is characteristic. Computed tomography (CT) and Magnetic Ressonâninca (RM) are important to identify the agencies involved and guide the choice of surgical approach[10].

The treatment includes surgical expected complete enucleation[13,14,15] without breaking the cyst as the intraluminal contents can act as irritants fibrovascular tissue, producing postoperative inflammation. However, marsupialization is another alternative for the management of large cysts[16]. Based on the location of the cyst or an intra or extra-oral surgical approach is followed[7]. The first is the most suitable for small injuries, reserving the latter for large lesions. In a study of mandibular osteotomy and intraoral approach and combined extra-oral[9]. An exclusively intra-oral approach (as in our case) can be used in large lesions if there is no superinfection or disability; which implies a lower risk of postoperative superinfection, which reduces the length of hospital stay, and provides an excellent cosmetic result[9].

4. CONCLUSION

Due to the process of evolution of the lesion and the size that can achieve early diagnosis and surgical treatment become imperative to improve the patient's condition. The location of the lesion relative to mylohyoid andgeniohyoidmuscles is very important to determine the surgical approach that will provide the best treatment. Postoperative prognosis is good, and malignant transformation is exceptional.

REFERENCES

[1] Neville BW, Damm DD, Allen CM, Bouquot JE. PatologiaBucal. 2ª ed. Philadelphia: Saunders; 2002

[2] Meyer I. Dermoid cistos (dermoids) do assoalho da boca. Oral SurgPathol Oral Oral Med. 1955; 27:1149-64

[3] Shylaja MD, Attur K, Mohtta A, Goud S. Teratóides cisto da língua: Relato de uma variante rara de cisto dermóide e revisão da literatura sobre dermoid cisto indiano J Stomatol. 2011; 2: 267-9

[4] Shear, M. Cistos da região buco-maxilofacial.3a ed. São Paulo: Santos; 1999

[5] Jeyaraj P, Sahoo NK. Um caso de uma invulgarmente grande cisto dermóide sublingual da região maxilofacial. J DentMedMedSci. 2012; 2: 19-25.

[6] Jadwani S, Misra B, Kallianpur S, Bansod S. Dermoid cisto do assoalho da boca com cabelo abundante: relato de caso. J Maxillofac Oral Surg. 2009; 8:. 388-9

[7] Fernandez JL, JL Rojas, JA Fernandez, Quevedo MS. Cisto dermóide do assoalho da boca. Acta Otorrinolaringol Esp. 2007; 58: 31-3. [PubMed].

[8] 8.GR Seward.Cistosdermóides do assoalho da boca. Br J Surg Oral, 3 (1965), pp. 36-47.

[9] F. Longo, P. Maremonti, Mangone GM, et al. Cisto da linha média dermoid do assoalho da boca: relato de 16 casos e avaliação de técnicas cirúrgicas. PlastSurgReconst, 112 (6) (2003), pp. 1.560-1.565.

[10] Y. Ariyosni, M. Shimahara. A ressonância magnética de cisto dermóide submental: relato de um caso. J Oral MaxillofacSurg, 61 (2003), pp. 507-510.

[11] Yousem D, R. GrossmanNeurorradiologia:. Os requisitos 3rd ed. Philadelphia, PA: Mosby; 2010. ISBN: 978-0323045216.

[12] Harnsberger H, Glastonbury C. Diagnóstico por Imagem:. De Cabeça e Pescoço 2nd ed. Philadelphia, PA: Amirsys; 2011. ISBN: 978-1931884785.

[13] Tsirevelou P, M Papamanthos, Chlopsidis P, Zourou I, Skoulakis C. Cisto epidermóide do assoalho da boca: relato de dois casos. Casos J. 2009; 2: 9360 [PMC artigo livre] [PubMed]

[14] Jha AK, Sahoo NK. Um caso incomum de cisto epidermóide submental em uma criança de dez anos: relato de caso. Int J Caso Rep Imagem. 2011; 2 (10): 10-13.

[15] Chaturvedi J, K Hegde, Ananthamurthy A, Nayar R. Submental epidermóidecyst- relato de caso. Internet J Head NeckSurg. 2009; 4 (2).

[16] Jham BC, Duraes GV, Jham AC, Santos CR. Cisto epidermóide do assoalho da boca: relato de caso. J Dent Assoc Can. 2007; 73 (6):. 525-528 [PubMed].

[17] El-Momen MH, Gaafar AH, MagdyEA. .Lipomas da cabeça e pescoço: variabilidade Apresentação e work-up diagnóstico J LaryngolOtol. 2006; 120: 47-55. [PubMed]

[18] Glosser JW, Pires CA, Feinberg SE. Fissura branquial ou cistos linfoepiteliais cervicais: Etiologia e gestão.JAmDent Assoc. 2003; 134: 81-6. [PubMed].

[19] Ellis PD, van Nostrand AW. A anatomia aplicada de remanescentes do trato tireoglosso. Laryngoscope.1977; 87: 765-70.

[20] Tosios K, G Rallis, Vallianatou D, tumor Vlachodimitropoulos D. Amarelo-branca no assoalho da boca.OralSurg Oral Med Oral Pathol Oral RadiolEndod. 2006; 101:. 701-4.

[21] Rei RC, Smith BR, Burk JL. Cisto dermóide no assoalho da boca. A revisão da literatura e relatos de caso. Oral SurgPathol Oral Oral Med. 1994; 78:. 567-76.

[22] Huang C, Damrose E, Bhuta S, tumor Abemayor E. Kuttner (sclerosingsialadenitis crónica) Am J Otolaryngol. 2002; 23:. 394-7.