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Teratoid Cyst of the Floor of the Mouth: Case Report

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Abstract **Case Report**

Dermoid cysts are rare benign tumors of ectodermal origin, they are found in service-facial region with 7% of cases [1]. Floor of the mouth dermoid cysts is even more rare, and are generally localized in the median line of the genioglossus muscle [2]. They are classified as epidermoid cyst, real dermoid cyst and treated depending on the presence or not of the three embryologic contingents. We report the case of a giant congenital teratoid cyst of the floor of the mouth in a 5yo child.

Keywords: Dermoid cyst, floor of the mouth, childhood.

INTRODUCTION

Dermoid cysts are rare benign tumors of ectodermal origin. Approximately 80% of the cases occur in the ovaries and sacral region, with around 7% found in the head and neck region [1].

Floor of the mouth dermoid cysts represents 1 to 1,6% of all dermoid cysts [3]. Generally, they arise in the second and third decade of life with no sex preponderance.

Dermoid cysts are thought to occur when the ectodermal tissue of the first and second branchial arches is entrapped [2].

Dermoid cysts usually present as asymptomatic slow growing swelling which occasion- ally progress to the extent of making patient symptomatic with dysarthria, dysphagia, dysphonia, dyspnea and sometimes ‘‘Double Chin’’ aspect [4].

We report the case of a giant congenital teratoid cyst of the floor of the mouth in a 5 yo infant.

CASE REPORT

A five years old male child, with no medical history, presented a congenital painless sublingual mass bulging the floor of the mouth, progressively increasing in size since birth.

Upon examination, a giant mass of the floor of the mouth measuring 4 cm was found, soft, renitent and obstructing the oral cavity, altering the patient’s quality of life: dysarthria, dysphonia and dyspnea (Fig 1), easily noticeable upon inspection with a “Double chin” appearance. It is also responsible of prognathia and diastema. The rest of the maxillofacial and systemic examination was unremarkable.

Figure 1: Picture of our patient from the front, the intraoral mass, and profil photo of the patient

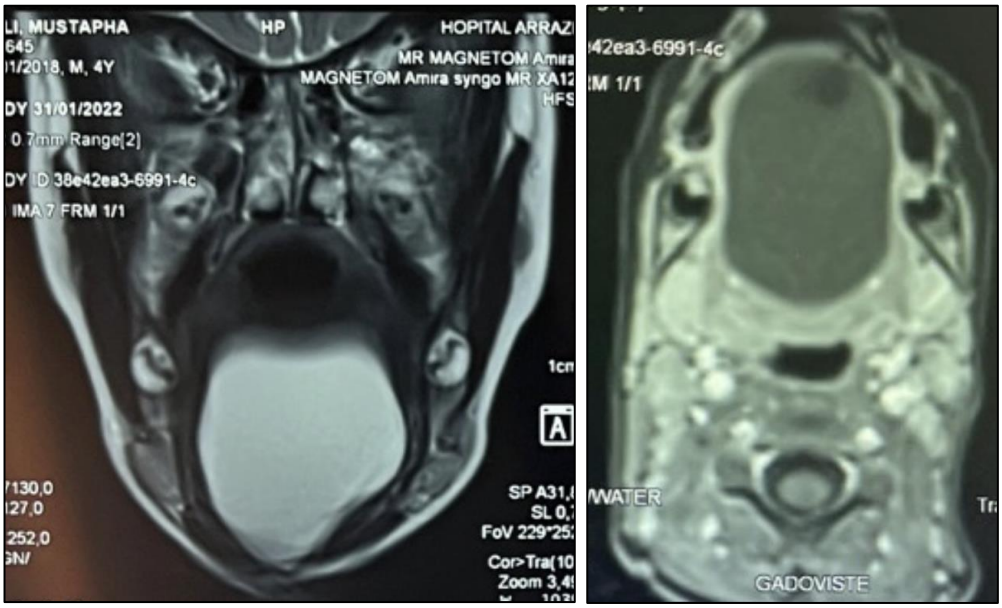

Figure 2: MRI image of the mass

Facial MRI has shown a sublingual mass superior to the mylohyoid muscle, of intense signal on T2 weighted images suggesting a dermoid cyst of the floor of the mouth.

At surgery, the mass was removed by intra-buccal approach, a horizontal incision was made above the orifices of warthon's ducts (Fig 3) without lesion of the adjacent elements, with sutures in one plane by resorbable type 3/0 Vicryl. Post-operative was simple and the patient improved clinically, without any recurrence in the 6 months post removal.

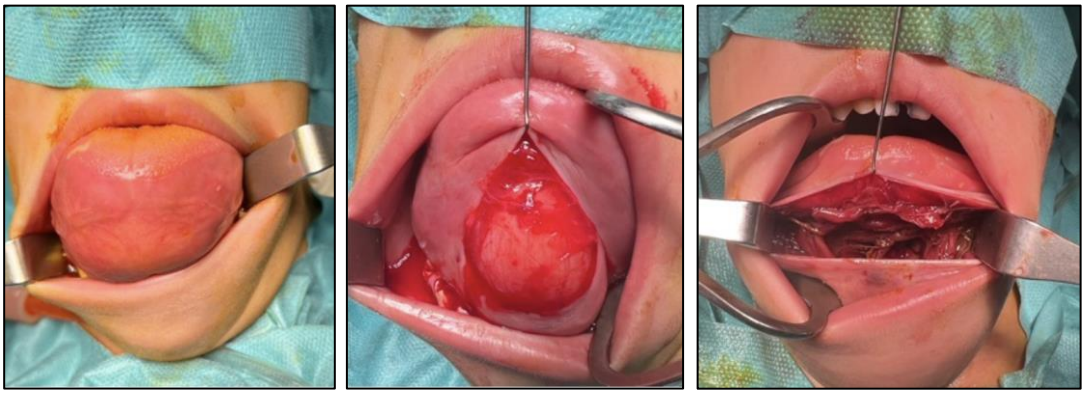

Figure 3: Intraoperative images before and after excision of the lesion

Figure 4: Appearance on day 7 after excision of the lesion

Pathology revealed the presence of a fibrous wall covered by squamous epithelium with the presence of cartilaginous tissue, salivary and sebaceous glands and a regular respiratory mucosa, suggesting a dermoid cyst of the teratoid variety.

DISCUSSION

Dermoid cysts are rare lesions of the oral and maxillofacial region. Oral dermoid cysts represent only 0.01% of all oral cysts and 1.6% of all dermoid cysts [5]. Several theories explain their formation by inclusions of ectodermal tissues in the midline during the fusion of the 3rd and 4th branchial arches [6].

New and Frich reported a 7% incidence of this lesion among all head and neck cysts. They have been identified in patients of all ages, but are most common between 15 and 35 years of age [7]. According to Walstad *et al*., there is no sexual predilection [8].

A dermoid cyst is defined as any cyst filled with sebaceous material and showing signs of specialized skin derived from defective embryonic development (dysodontogenic).

Clinically, these lesions present in the form of slowly growing, painless swellings, soft, well encapsulated and without lymphadenopathy. Some studies have tried aspirations as a diagnosis tool [2] and others to relieve the patient and improve their breathing. Possible complications after aspiration have been reported in the literature.

Dysarthria, dysphonia, dyspnea, and dysphagia are the main symptoms found in patients with a dermoid cyst of the floor of the mouth.

As a complementary examination, the literature considers the ultrasound [1], as the examination of choice, given that it is affordable, quick and painless. It is effective in diagnosing solid, vascular or cystic lesions, but limited in giving an idea of adhesion to neighboring tissues and in confirming the suspected diagnosis. This is why we opted for an MRI as the only imaging in our case.

The differential diagnosis of these dysodontogenic cysts is an infectious process, a lymphoepithelial cyst, a thyroglossal cyst, a dermoid cyst, a pleomorphic adenoma and a cystic hygroma. Other remote possibilities are lipoma, neurofibroma, hemangioma, and lymphangioma.

There are two different classifications for dysodontogenic cysts: histological and anatomical classifications. Histological classification is based on the content of the cyst mucosa. If only the epidermis is present in the cyst lining, the lesion is called epidermoid. If skin appendages are present, the cyst is called true dermoid. When tissues derived from the three germ layers are present, we speak of teratoma (case of our patient). The anatomical classification is based on its relationship to the geniohyoid, mylohyoid, and genioglossal muscles. This relationship determines whether the lesions are located in the sublingual, submental, or submandibular spaces.

The surgical approach will depend on its location. According to King et al, 70% of the 195 cases examined were excised intraorally [4]. Submandibular and submental cysts are best enucleated through an extraoral incision. Large cysts are enucleated using an extra-oral approach, as it allows better visualization of surrounding structures, control of bleeding and avoids intra-oral contamination of the surgical approach.

The approach depends on the location of the cyst, the intraoral route is appropriate for sublingual cysts and this was the case for our patient.

The recurrence rate is low and results from incomplete excision.

CONCLUSION

Dermoid cysts of the floor of the mouth are rare benign tumors, that forms from the inclusion of ectodermal tissues during fusion of the branchial arches.

They evolve quietly until a considerable increase in size and then push patients to consult for: dysphonia, dysarthria, dyspnea, and dysphagia.

There is no complementary examination of choice, everything depends on the surgeon's choice and the patients' means. Finally, the treatment is based on surgical excision.

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