


Dermoid cyst of the upper lip in a pediatric patient: Case Report

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Abstract:

Introduction: Dermoid cyst (DC) is a slow-growing benign developmental cysts that arises from ectodermal tissue and can occur anywhere in the body, with only 34% occurring in the head and neck region, of which 6.5% are located in the mouth floor and rarely in the upper lip. It usually presents as painless, slow-growing lesion with doughy consistency and is often soft and well encapsulated - generally observed on the second to third decade of life. **Objective:** The objective of this article is to report a case of DC, focusing on its clinical and histopathological characteristics, and to discuss possible clinical presentations to assist in the diagnosis of this rare lesion in the oral cavity. **Case Report:** A 4-year-old female was referred for evaluation of an asymptomatic swelling in the left upper lip mucosa region lasting 1 year. Extraoral clinical examination showed no alterations. Intraoral clinical examination revealed the presence of a single painless well-defined nodular, sessile, non-tender swelling covered by normal oral mucosa, and located in the upper labial mucosa. An excisional biopsy was performed, and microscopic examination revealed a cystic cavity covered by orthokeratinized stratified squamous epithelium with hair follicles and sebaceous glands found within the fibrous wall. Patient recovery was uneventful and there are no signs of local recurrence in a two-year clinical follow-up. **Conclusion:** DC can occur anywhere in the body, but once in the oral cavity, it is rarely observed in the upper lip. **Keywords:** Dermoid cyst; Lip; Child.

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INTRODUCTION

Dermoid cyst (DC) is a slow-growing benign developmental cysts that arise from ectodermal tissue and can occur anywhere in the body - with most cases arising from the anus and ovaries. In addition, the head and neck region accounts for approximately 34%, of which only 6.5% are located in the mouth floor¹⁻³. In the oral cavity, these cysts are frequently observed in the midline of the floor of the mouth, however, DCs rarely occur in the upper lip. The pathogenesis of DC has been attributed to 3 possible etiologies: a post-traumatic or iatrogenic dermal inclusion, a germinal (mostly pelvic) congenital teratoma, or even a dermal or epidermal inclusion along the embryonic cleft closure lines¹.

Clinically, DC presents as a painless, slow-growing lesion with doughy consistency and is often soft and well encapsulated, which may cause dysphonia and dysphagia in some cases³. Secondary infection can cause algic symptoms in some cases¹⁻³. The disease has a predilection for females and most patients are in the second to third decades of life⁴, usually as a solitary lesion, however, bilateral cysts have been reported⁵. Histopathological examination reveals a pathological cavity lined by epithelium, displaying skin attachments like hair, hair follicles, sebaceous glands, and sweat glands on the cystic wall - with the presence or not of keratin or sebaceous material within it³⁻⁷. Finally, DC shows good prognosis and rare recurrences once completely enucleated¹⁻⁷.

Therefore, we report a case of DC in a 4-year-old female presenting a 1-year lasting swelling in the left upper lip mucosa region - an usual location.

CASE REPORT

A 4-year-old female was referred for evaluation of a 1-year lasting asymptomatic oral swelling in the left upper lip mucosa region. Medical history was non-contributory. Extraoral clinical examination showed no alterations. Intraoral clinical examination revealed the presence of a painless, well-defined, yellowish, and fluctuant nodule of smooth consistency covered by normal oral mucosa, measuring 1,5 cm and located in the upper labial mucosa (Fig. 1A). Clinical diagnostic hypotheses included lipoma, pleomorphic adenoma and dermoid cyst and an excisional biopsy was performed under local anesthesia (Fig. 1B). Macroscopic appearance of the specimens was of a 12 x 7 x 4 mm soft brownish tissue fragment of irregular surface and fibroelastic consistency, which showed a cystic cavity after sectioning. Microscopic analysis revealed a cystic cavity covered by orthokeratinized stratified squamous epithelium with hair follicles and sebaceous glands found within the fibrous wall (Fig. 1C-D) confirming the diagnosis of DC. The patient recovery was uneventful and there are no signs of local recurrence in a two-year clinical follow-up.

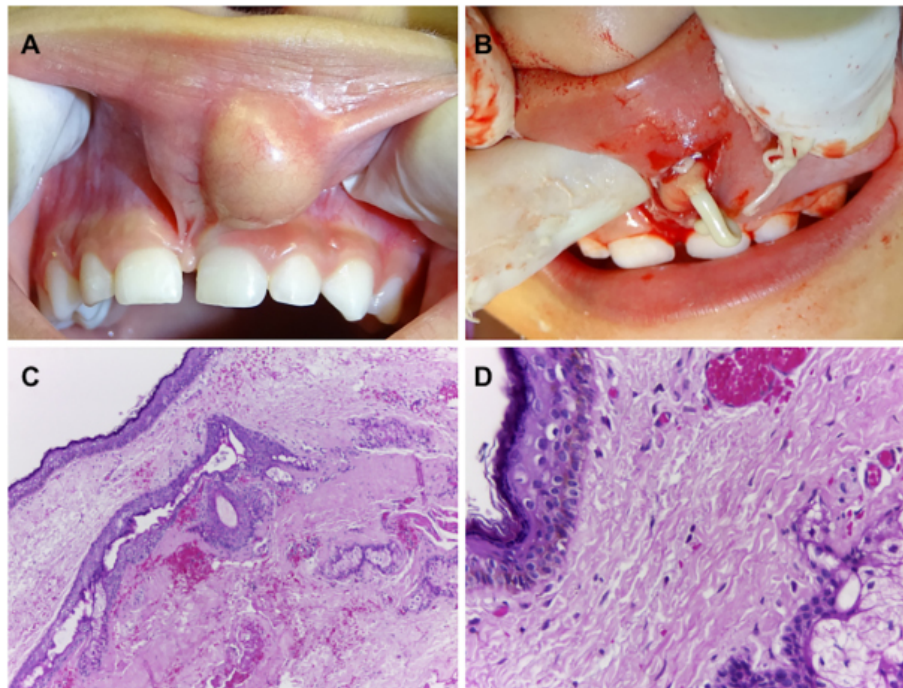


Fig. 1. Clinical and microscopic features of dermoid cyst in a pediatric female. A. Intraorally, a well-defined lesion of yellowish coloration with smooth consistency, located lateral to the midline was observed. B. During the intraoral surgical approach, a white cheesy material could be observed arising from the cyst. C-D. A cystic cavity covered by orthokeratinized stratified squamous epithelium. Hair follicles and sebaceous glands were found within the fibrous wall (Hematoxylin-eosin, A, 100X, B-D, 400X).

DISCUSSION

Dermoid cyst is an uncommon benign lesion in the head and neck region, accounting for 7% of all cases and are even lesser when compared to other oral cysts, which it only represents between 0.01 and 1.6%⁴. It shows a female prevalence and affects patients with a mean of 35 years, ranging from 7-months to 77 years⁴⁻⁸. In the oral cavity, the floor of the mouth stands as its preferred location, followed by other sites such as the lips¹. However, DC arising from the upper lip was only reported in 4 previous cases^{6,8,9,10} - 50% of them affecting pediatric patients^{9,10}, as in the present case.

Clinical differential diagnosis is extensive and includes a spectrum of oral lesions such as odontogenic and non odontogenic cysts and minor salivary gland tumors¹⁰⁻¹³. These lesions are often detected by the patient or during a routine dental exam, specially once located on the lips. The clinical history, bone involvement and microscopic findings after the biopsy exam are essential in determining the diagnosis. In the present case, DC was included in the differential diagnosis, although it was not our main hypothesis. However, as it presented as a slow-growing, well-defined submerged nodule, with no malignant characteristics, the excisional biopsy was indicated and could be performed under local anesthesia.

Histopathologically, the main difference between DCs and epidermoid cysts are the presence of dermal attachments, such as sweat glands, hair follicles and sebaceous glands - even though both lesions show stratified squamous epithelium lining⁴⁻⁹. Nevertheless, in some cases other epithelial types - respiratory and intestinal epithelium - may be observed in DCs and therefore, it should alert the pathologist not to misdiagnose it⁴. Furthermore, although rare, additional care should be taken to fully remove the lesion, since its malignant transformation has already been reported^{14,15}.

DCs are benign neoplasms and usually, are approached with conservative therapeutic management. The patients' clinical approach is usually determined by the location of the tumor (intraoral or extraoral) and patient's general health status (general anesthesia or local anesthesia)¹⁻¹⁰. In general, DC shows good prognosis, however, Recurrences are rare, but have been reported in the literature, especially in cases that excision was not complete¹⁶. The present case reported a conservative treatment of DC, showing no signs of recurrence on a two-year follow-up.

CONCLUSION

DC is a slow-growing benign developmental cyst arising from ectodermal tissues and can occur anywhere in the body, but once in the oral cavity, it is rarely observed in the upper lip. Clinical diagnosis should be confirmed through histopathological examination, and it is primarily differentiated from epidermoid cysts due to dermal appendages presence. DC may occur on a wide age range, but it is frequently found in pediatric patients.

CONFLICTS OF INTEREST

None

ETHICAL APPROVAL

Data from the patient here included were treated anonymously and statement of informed consent was signed by the patient allowing the use of his dental records.

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