

Un-usual Age and Site of Oral Mucoceles, and Literature Review

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Abstract

Mucocele is a common oral mucosal lesion, but it is rarely observed in the infant. Mucocele is pseudo-cyst formed due to extravasation or retention of mucous in submucosal tissue from minor salivary glands. Mucocele is known to occur most commonly on the lower lip; 80%, followed by the floor of mouth and buccal mucosa. Trauma, and lip biting habit are the main causes. We presented a rare case of bilateral mucoceles in a 40-day-old male. They were placed at the side of margins of the lower ridge lingually near to the future sites of primary molars area. We Reassure the anxious mother, and take care, and review, the infant. As 44% of mucoceles in children spontaneously resolved after an average period of three months. Both mucoceles were resolved spontaneously over a period of 5 month. The options of treatment include surgical excision, cryotherapy, and laser vaporization. To prevent recurrences when the lesion is associated with an underlying mucocutaneous disease, management of the causative disease is necessary. Fortunately in this case both mucoceles were diminished and disappeared by their own.

Keywords: Mucocele; Infant; Salivary Glands; Duct

Introduction and Literature Review

Oral mucocele present one of the most common benign lesions of the oral mucosa. Mucus extravasation generally regarded as being of traumatic origin, and mucus retention, resulting from obstruction of the duct of a minor or accessory gland. When located on the floor of the mouth, these lesions are called ranulas because the inflammation resembles the cheeks of a frog [1]. The most common site of occurrence is the lower lip [2], rarely affecting the upper lip, soft palate, retromolar region, lingual frenum, and dorsum of the tongue [3]. It is and rarely observed in infants making the diagnosis and management of mucocele challenging [4]. The lesion has no sex predilection in some studies, but have in others; male: female ratio 19:6 [10], and all age groups are susceptible, with the peak frequency reported to be in the second and third decades. The exact mechanism behind formation of the mucocele is still not exactly known. However, it may result from mechanical trauma to the excretory duct of the salivary glands, leading to duct transaction or rupture with consequent extravasation of mucin to the connective tissue stroma; mucous extravasation phenomenon. Mucus might be retained in the duct or acinus as a result of duct obstruction leading to mucous retention phenomenon [5].

Different treatment modalities have been suggested, like surgical excision, marsupialization, micro-marsupialization, and lasers [7]. Histopathological examination of all the excised mucoceles [10] is essential to exclude any neoplastic changes of the lesions, or similar lesions.

Case Report

A mother of a 40 days old male Libyan infant noticed, while feeding, un-usual swelling in her infant’s mouth. History revealed that Infant was well and fit, full term, normal delivery, body weight at delivery was 3 kg. Breast feeding. No history of trauma. His mother saw the first swelling in the right side of his ridge then few days later she noticed another swelling in the same place in the left side. Infant when arrived to the clinic was 2 months old. Clinical examination revealed bilateral fluctuant swelling approximately 4 - 5 cm at its widest diameter with a sessile base, smooth in consistency, clearly defined limits, and a smooth surface, placed at side of the ridges, normal color of the overlying mucosa (Figure 1, 2). Case diagnosed as mucoceles. We reassured the anxious mother, and give her oral hygiene instructions, and feeding instructions. We were avoiding surgical intervention at this age. The case reviewed every 4 weeks. Fortunately both mucoceles were disappeared 4 months later.



Figure 1



Figure 2

Discussion

Both lesions have a classical character of the mucoceles. Infant age was 40 days when lesions appeared, compared with Neha Bhargava’s case who was 11 months old [6]. The place is also unusual; bilateral at the lower ridges lingually. The etiology is unknown. His

educated mother denied any kind of trauma. Mucoceles and ranulas may spontaneously resolve, especially in infants and young children. In a recent retrospective study, approximately 44% of mucoceles in children spontaneously resolved after an average of 3 months. If symptoms are minimal, in this young age group, aspiration of the lesions, and periodic follow-up for 6 months have been suggested as an alternative to surgery [7]. Hence mucoceles may spontaneously resolve, our approach was conservative, because the infant was only 2 months old, we gave a chance for the lesion to diminish by its own. The result of healing met our strategy. In general Surgical excision of the mucocele along with the adjacent associated minor salivary glands is recommended. The risk for recurrence is minimal when appropriate surgical excision performed. Aspiration only of the mucocele's contents often results in recurrence, and is not appropriate therapy, except to exclude other entities prior to surgical excision. Large lesions may be marsupialized to prevent significant loss of tissue or to decrease the risk for significantly traumatizing the labial branch of the mental nerve. If the fibrous wall is thick, moderate-sized lesions may be treated by dissection. If this surgical approach is used, the adjacent minor salivary glands must be removed. The use of a micro-marsupialization technique for mucoceles in pediatric patients has been reported. This technique involves the placement of a 4.0 silk suture through the widest diameter of the lesion without engaging the underlying tissue. A surgical knot is made, and the suture is left in place for 7 days. Patients need to be educated about suture replacement; if it is lost during the 7-day period. The idea behind this alternative treatment for mucoceles of minor salivary glands is that re-epithelization of the severed duct occurs or a new epithelial-lined duct forms, allowing egress of saliva from the minor salivary gland. The recurrence rate after a short follow-up period has been 14% in pediatric patients. This technique is not indicated for lesions larger than 1 cm in diameter. The other approaches include surgical excision, cryotherapy, and laser vaporization. Laser ablation, cryosurgery, and electrocautery have also been used for the treatment of the conventional mucocele with variable success [8].

Mucoceles usually require excisional biopsy and removal of the servicing minor salivary glands. If a vascular lesion cannot be excluded from the differential diagnosis, then aspiration of the lesion is prudent for evaluation of the fluid contents. Large mucoceles may be best treated by marsupialization because of the risk of traumatizing the labial branch of the mental nerve. Dissection of the lesion along with the adjacent salivary glands is indicated for moderate-sized lesions. The micro-marsupialization technique and laser removal are additional treatment approaches [9].

Histopathological confirmation owing to its close resemblance to neoplastic, lesions such as vesiculobullous lesions, hemangioma, and neoplastic diseases such as mucoepidermoid carcinoma, embryonal rhabdomyosarcoma of lower lip closely mimic mucocele, and this fact warrants histopathological examination of all the excised mucoceles [10].

Conclusion

Mucoceles are mostly benign oral lesions, and self-limiting in nature, usually diagnosed based on clinical findings. Most of the reported literature showed trauma and habitual lip biting are the main causes, and a definite male predominance which is most frequently noticed in the second and third decade of life. Findings of this case report are in concordance with earlier studies that extravasation phenomenon is far more common than retention and extravasation mucocele, but this child is the youngest. To avoid misdiagnosis, it is always logic to subject it to histopathological confirmation due to its close resemblance to neoplastic, lesions such as vesiculobullous lesions, hemangioma, and neoplastic diseases such as mucoepidermoid carcinoma, embryonal rhabdomyosarcoma of lower lip closely mimic mucocele.

Conflict of Interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

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