

Management of Mucocele lesions on lower lip : A case series...

Neha Pawar^{*}, Neeta Padmawar^{**}, Sourabh Joshi^{***}, Mitesh Kathariya^{***}, Viddyasagar Mopagar^{***}

Abstract:

Mucocele is one of the most common lesions of the oral mucosa. It usually results from accumulation of mucous secretion due to trauma and lip biting habits or alteration of minor salivary glands. Based on histological features mucoceles can be divided into two types : Extravasation and retention. Mucoceles can occur anywhere in the oral mucosa such as lip, cheeks and in the floor of the mouth, but appears mainly in lower lip. Diagnosis is mostly based on clinical findings and history. The most common location of the extravasation mucocele is the lower lip. Mucoceles mostly affect young children but can also affect all the age groups. They may have a soft consistency, bluish, and transparent cystic swelling, history of bursting and collapsing due to which they resolve themselves then refilling, which may repeat. The treatment of choice is surgical removal.

Key words: *Mucocele, lower lip, minor salivary glands.*

Introduction

Mucocele is defined as mucous-filled cavities, which can appear in the oral cavity, appendix, gallbladder, paranasal sinuses and lacrimal sacs.[1,2] The term mucocele is derived from a Latin word, mucous and cocele means cavity.[3] Mucocele is the 17th most common salivary gland lesions seen in the oral cavity.[4] Mucocele is the result of accumulation of liquid or mucoid material due to the alteration in the minor salivary gland which causes limited swelling,[5]. It is characterized by a rounded, well-circumscribed, transparent, and bluish-colored lesion of variable size. Clinically they are soft in consistency and fluctuate while on palpation. Mucocele is painless and has a tendency to relapse..[6,7] They are subdivided into two types: I. Mucous extravasation type, which is regarded as being a result of trauma, like lip biting. II. Mucous retention type, which results from the obstruction of the duct of a minor and/or accessory salivary glands.[1,8,9] Mucocele clinically appear as an

asymptomatic vesicle or bulla with a pink or bluish-color, and their size may vary from 1 mm to several centimeters in diameter and affect both genders in all age groups,^[10] with the peak age of incidence is between 10 to 20 years.[1] Lower labial mucosa is the most frequently affected site, but can also develop in cheek, tongue, palate. When it appears in floor of the mouth, it is called as ranula.[1] Mucocele can arise within a few days after minor trauma, but then plateau in size. The diameter may range from a few millimeters to a few centimeters. If left without intervention, an episodic decrease and increase in size may be observed, based on rupture and subsequent mucin production.

This case report aims to explain the history, clinical features, and surgical treatment of mucocele using a simple surgical technique, which helps to enhance the knowledge of the general dental practitioner.

Case report 1

A 12 year old female reported to the Department of Pedodontics and Preventive Dentistry Rural Dental College Loni with chief complaint of swelling on lower lip right side since three months. By history the child reported trauma on the lower lip 5 months back. The swelling was initially small in size and had increased to one centimeter in diameter, fig(a). Intraoral examination revealed the swelling was soft in consistency and non

^{*}Post graduate students, ^{**}Readers, ^{***}Professor and Head, Department of Pedodontics and Preventive Dentistry Rural Dental College, LONI

Corresponding author :

Dr Neha Pawar, Post graduate student, Department of Pedodontics and Preventive Dentistry, Rural Dental College PIMS(DU)LONI; Email: np9762@gmail.com

tender on palpation. The child did not give any relevant medical history. Routine blood investigations were done, and the values were in the normal range.



Fig No. a : Pre operative photograph of lesion

On the basis of the history and clinical features the case was provisionally diagnosed as a mucocele. The treatment was planned and explained to the parents. Parent consent was obtained. Surgical removal of the lesion was planned and performed by placing an incision vertically fig (b,c); therefore splitting the overlying mucosa. To reduce the chances of re-occurrence resection of the mucocele was done from the base fig(d). Resorbable sutures were placed fig(e). The resected lesion was sent for histopathological examination which diagnosed as extravasation mucocele. Parents were instructed to bring the patient for regular recall visit and patient regularly reviewed at 3 months interval for one year and no recurrence was noted.



Fig No. b : Incision and reflection of overlying mucosa



Fig No. c : Incision and reflection of overlying mucosa



Fig No. d : Excised mucocele with minor salivary glands



Fig No. e : Post – operative photograph of sutures placed.

Case report 2

A nine year old male reported to the Department of Pedodontics and Preventive Dentistry Rural Dental College Loni with a chief complaint of swelling on lower lip since 2 months. The patient also gave a history of lip biting since last 1 year. The swelling was initially small in size and now had increased till the present stage. On examination the lesion was painless, soft in consistency, round in shape about 1cm in diameter and was not associated with fever or malaise fig(a). Routine blood investigations were done, and the values were in the normal range.

Based on history and clinical features , the case was provisionally diagnosed as a mucocele . The treatment was planned and explained to the parents. Parental consent was obtained and treatment was performed. Surgical removal of the lesion was performed and was sent for histopathological examination which diagnosed it as mucocele.

Discussion

Mucocele is a common lesion of the oral mucosa affecting the general population. It can arise from alteration of minor salivary glands due to a mucous accumulation.^[5] Yamasoba *et al.* 1990 highlighted two etiological factors in mucocele: Traumatism and obstruction of salivary gland ducts. Mucocele of the minor salivary gland are very rarely larger in diameter and

moreover always superficial. Extravasation mucocele are caused by a leaking of fluid from ducts or acini to surrounding tissue due to physical injury. This type of mucocele is commonly found in the minor salivary glands.

Diagnosis is mainly based on history and clinical findings. The appearance of mucoceles is pathognomonic [3] and location of the lesion, history of trauma, rapid appearance, variations in size, bluish-color and the consistency are some of the important factors to be considered before the final diagnosis are made.

Literature showed oral habits such as lip biting/sucking is one of the etiologic factors for the oral lesions such as irritation fibroma and mucocele. Radiographic evaluation is needed to rule out if sialoliths are considered a contributing factor in the formation of oral and cervical ranulas. The fine needle aspiration cytology demonstrates the mucus retention phenomenon. The chemical analysis could disclose protein content and high amylase. The localization and determination of the origin of the lesion can be done by computed tomography scanning and magnetic resonance imaging. Palpation can be helpful for a correct differential diagnosis. Lipomas and tumors of minor salivary glands present no fluctuation while cysts, mucoceles, abscess, and hemangiomas show fluctuation.

Conventional treatment is the surgical extirpation of the surrounding mucosa and glandular tissue below the muscle layer. With a simple incision of the mucocele, the content would drain out but the lesion would reappear as soon as the wound heals. Surgical excision with removal of the involved accessory salivary glands has been suggested as the treatment. Marsupialization will only result in re-occurrence.

The excised tissue must be submitted for the pathological investigations to confirm the diagnosis and rule out the salivary gland tumors. Laser ablation, cryosurgery, and electrocautery are approaches that have also been used for the conventional treatment of the mucocele with variable success.

Conclusion

Mucoceleles are mostly benign and self-limiting in nature, primarily diagnosed based on clinical findings followed by definitive diagnosis based on the histopathological investigation. Most of the reported literature showed lesion arose followed by trauma and habitual lip biting. Hence, a school based educational awareness program for both children and parents at 6 months interval and interception of the oral habit among children is the key factor. Patients undergoing orthodontic therapy should

be monitored periodically for areas of irritation in the oral mucosa. Complete excision has been the easiest way of treatment choice, and recurrence has been associated if the lesion removed incompletely



Fig No. f : Pre- operative photograph of the lesion



Fig No. g : Incision given and overlying mucosa reflected.



Fig No. h : Excised mucocele



Fig No. i : Sutures placed after excision

References

1. Baurmash HD. Mucoceles and Ranulas. *J Oral Maxillofac Surg.*2003; 61: 369–78.
2. Ozturk K, Yaman H, Arbag H, Koroglu D, Toy H. Submandibular gland mucocele: Report of two cases. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2005;100:732–5.
3. Yagüe-García J, España-Tost AJ, Berini-Aytés L, Gay-Escoda C. Treatment of oral mucocele-scalpel versus CO 2 laser. *Med Oral Patol Oral Cir Bucal*2009;14:ed 469–74.
4. Flaitz CM, Hicks JM. Mucocele and Ranula. *e Medicine.* 2015. [Last cited on 2015 Feb 01].
5. Bagán Sebastián JV, Silvestre Donat FJ, Peñarrocha Diago M, Milián Masanet MA. Clinico-pathological study of oral mucoceles. *Av Odontoestomatol.* 1990;6:389–91.
6. Eveson JW. Superficial mucoceles: Pitfall in clinical and microscopic diagnosis. *Oral Surg Oral Med Oral Pathol.* 1988;66:318–22.
7. Bermejo A, Aguirre JM, López P, Saez MR. Superficial mucocele: Report of 4 cases. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 1999;88:469–72.
8. Delbem AC, Cunha RF, Vieira AE, Ribeiro LL. Treatment of mucus retention phenomena in children by the micro-marsupialization technique: case reports. *Pediatr Dent.* 2000;22:155–8.
9. Porter SR, Scully C, Kainth B, Ward-Booth P. Multiple salivary mucoceles in a young boy. *Int J Paediatr Dent.* 1998;8:149–51.
10. Neville B, Damn DD, Allen CM, Bouquot JJ. *Oral and Maxillofacial Pathology.* 2nd ed. Philadelphia: W. B. Saunders; 2002. pp. 389–92.

