Lipoma – Case Report of a Rare Intraoral Tumor

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Abstract

Lipomas are well-circumscribed benign tumors and represent the most common mesenchymal neoplasms. However, it is very rare in oral cavity with only 1% to 4.4% occurring in this region. The literature is scanty on lipomas occurring in intra-oral soft tissues. The purpose of this report is to highlight the existence of this rare but not uncommon disease and to emphasize that a high index of suspicion is needed in making a diagnosis.

Keywords : Lipomas, Buccal Mucosa, Benign Tumor, Mesenchymal Neoplasm.

Introduction

Lipomas are benign mesenchymal soft tissue neoplasm of mature adipose tissue.[1] They are relatively rare in the oral cavity, accounting for 1%–4.4% of all benign tumors.[1] Their aetiology and pathogenesis remain unclear, Although mechanical, endocrine and inflammatory influences have been reported. It may originate from embryonic rests of lipoblasts and proliferating embryonic mesoderm, fatty degeneration of other cells or metaplasia of muscle cells.[2]

It was reported that buccal mucosa (32%) is the most common site involved for intra-oral lipomas followed by tongue (20%), floor of the mouth (15%), buccal sulcus and vestibule (12%), and other locations (21%).[3]

The exact nature of this tumor is uncertain but it is widely accepted that lipoma represents a true benign tumor. Lipomas may occur sporadically or as one of several inherited disorders including familial multiple lipomatosis and benign symmetric lipomatosis.[3] Intraoral lipomas generally arise submucosally, presenting as soft, well-defined mobile masses with yellowish appearance. There appearance resembles other benign soft tissue lesions. They are asymptomatic in majority of cases but may cause discomfort during speech and mastication in larger cases.[4]

Here, we present a case of lipoma on buccal mucosa which was clinically diagnosed as a mucus extravasation cyst based on history and clinical examination. A confirmed diagnosis was made only after histopathological examination.

Case report

A 53 year old male patient reported to the Department of Oral Medicine and Radiology with the chief complaint of intra-oral swelling on left cheek region. Swelling appeared on left buccal mucosa one year ago after an incident of cheek biting, showing continuous gradual enlargement and causing discomfort on occluding the teeth. Patient reported an

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episode of clear fluid discharge at the site of swelling few days after its appearance. There was no associated pain Nothing relevant was reported in the past medical and dental history.

On inspection, a solitary dome shaped swelling was observed on left buccal mucosa, opposite to second premolar. Swelling measured 10 x 10 mm in size, pink in color with orange hue, having a smooth surface with well defined regular margins. Overlying mucosa was normal. Underlying capillaries were clearly demarcated on the surface of the lesion. The lesion on palpation was found to be non-tender, fluctuant, soft in consistency and mobile in nature. [Figure 1]

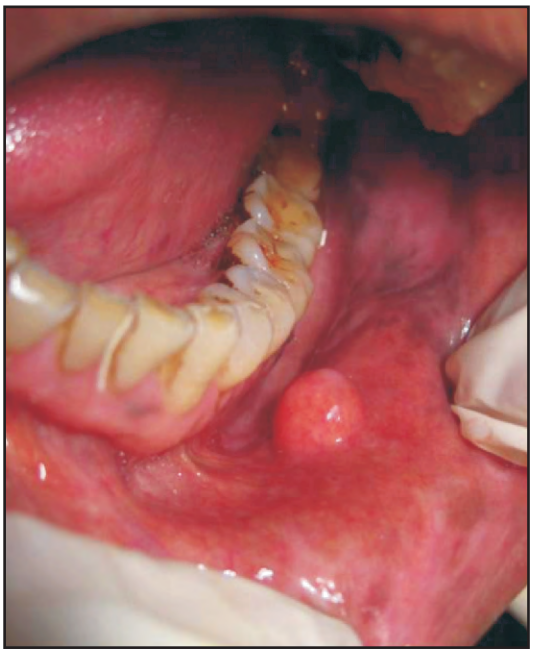

Figure 1: Intra-oral swelling on left buccal mucosa

Based on the history and clinical examination, a provisional diagnosis of mucus extravastion cyst was made. Differential diagnosis considered were fibrous hyperplasia/fibroma, lipoma, peripheral nerve tumors [neurofibroma, schwannoma, traumatic neuroma] and minor salivary gland tumor.

All routine blood investigations were within the normal limits.

The patient was called for phase I therapy and on the following visit, the swelling was excised surgically and sent for histopathological examination. Post-op instructions were given and patient was kept on antibiotic and analgesic coverage. Patient was recalled after a week and healing was found to be satisfactory. Follow up of the patient for 6 months did not show any sign of recurrence.

Histopathological report

Submitted H and E section showed cluster of mature adipocytes separated by fibrous connective tissue septa showing lobular appearance. Thin zone of connective tissue separated the lesional tissue from overlying parakeratinized stratified squamous epithelium. Histopathological picture was suggestive of lipoma. [Figure 2]

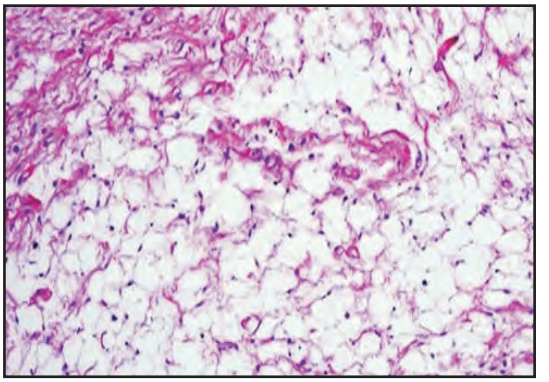

Figure 2: Histological picture showing cluster of mature adipocytes separated by fibrous connective tissue septa

Discussion

Benign lipomas are the most common mesenchymal tumors of soft tissues, but only 1-4% affects the oral cavity. Roux in 1848 described the first oral lipoma and he referred to it as "yellow epulis".[5] Most lipomas are developmental ones occurring in maxillofacial regions, usually arise late in life and are presumed to be neoplasms;

occasionally associated with trauma. Oral lipomas are evenly distributed between sexes and most of these patients are aged over 40 years.[6] Few lipomas show re-arrangement of 12q, 13p, 6p chromosomes.[7] Howard and Helwing proposed that embryonic sequestration of multipotential cells become activated at puberty by hormones and differentiate into simple lipomas.[8] The pathogenesis of lipoma is uncertain, but they appear to be more common in obese people. However, the metabolism of lipoma is completely independent of the normal body fat. If the caloric intake is reduced, lipomas do not decrease in size, although normal body fat may be lost.[9]

The lipoma lesion can occur almost anywhere in the body; oral lipomas predominantly affect the buccal mucosa, lips, tongue, palate and floor of mouth.[2] Clinically, oral lipomas generally present as mobile, painless submucosal nodules, with yellowish tinge. In some cases, oral soft tissue lipomas can present as a fluctuant nodule. All these findings were in accordance with our case however, onset of the lesion following trauma and an episode of fluid discharge led us to a provisional diagnosis of mucus extravasation cyst. Other lesions, such as oral dermoid and epidermoid cysts and oral lymphoepithelial cysts must be considered in the differential diagnosis of oral lipomas. Unlike oral lipomas, lymphoepithelial cysts are found in the floor of the mouth, soft palate and mucosa of the pharyngeal tonsil.[10] Although oral dermoid and epidermoid cysts can occur in other sites of the oral mucosa, they typically occur on the midline of the floor of the mouth.

Because an oral lipoma can occasionally present as a deep nodule with normal surface colour, salivary gland tumors and other benign mesenchymal neoplasms should also be included in the differential diagnosis. Lipomas have a less dense and more uniform appearance than the surrounding fibro-vascular tissue when transilluminated. Magnetic resonance imaging scans are very useful in diagnosis while CT Scans and ultrasonography are less reliable.[9]

Definitive diagnosis depends on correlation between clinical and histopathological features; however, histopathology remains the gold standard in the diagnosis of lipoma. Classic lipomas are composed of mature adipose tissue with true lipoblasts showing no cellular atypia. Several variants described include angio-lipoma, chondroid lipoma, myo-lipoma, spindle cell lipoma, pleomorphic lipoma, fibrolipoma, osteolipoma/chondrolipoma.[11] Lipomas of the oral and pharyngeal region are not difficult to differentiate from other lesions, although spindle cell and pleomorphic types of lipoma must be distinguished from liposarcoma.[11]

On occasions, lipomas of the buccal mucosa cannot be distinguished from a herniated buccal fat pad, except by the lack of a history of sudden onset after trauma. A clinician sending a surgical specimen to the pathologist for microscopic analysis must provide accurate clinical and surgical information in order to make a definitive diagnosis.[12]

The treatment of lipomas is surgical excision with rare recurrence. The asymptomatic course will allow the lesion to grow in most cases; it is the cosmetics, functional impairment that prompt the patient to seek dental assistance. Few complications like (a) obstruction of upper airway leading to asphyxial death in case of oesophageal fibrolipoma have been reported and (b) in long standing cases, liposarcoma can also

occur.[7] Multiple lipomas of head and neck have been observed in neurofibromatosis, gardner syndrome, encephalocraniocutaneous lipomatosis, multiple familial lipomatosis and proteus syndrome. Generalised lipomatosis have been reported to contribute to unilateral facial enlargement in hemifacial hypertrophy.[5] Lesions outside the oral cavity could show greater recurrence rates after surgical excision, but intraoral intramuscular lipomas, although not well-limited, rarely show recurrence if completely excised as seen in our case.

Conclusion

A dental surgeon should be able to diagnose lipomas in an early stage avoiding a massive growth of these lesions. It will be essential to prevent any aesthetic and functional disturbances in patients. An adequate treatment and postsurgical follow up in lipomas is fundamental for monitoring any possible chances of recurrence.

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