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CASE REPORT
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UNUSUAL CASE OF PHLEBOLITHS IN ORAL CAVITY MUCOSA

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ABSTRACT

INTRODUCTION

Soft tissue calcifications in the oral cavity are uncommon and can pose diagnostic challenges due to their varied clinical presentation and etiology. These lesions may be asymptomatic or associated with mild discomfort and are often discovered incidentally. Accurate diagnosis is essential to distinguish benign conditions from other more serious pathologies.

CASE REPORT

An 18-year-old female presented with a slowly enlarging swelling over the right cheek for the past four years. The swelling was approximately 2×2 cm in size, firm, non-tender, and freely movable, with no associated mucosal changes or history of trauma. Intraoral examination revealed a palpable nodule over the right buccal mucosa. Hematological investigations, including serum calcium and lipid profile, were within normal limits. A provisional diagnosis of soft tissue calcification was made. Surgical excision was carried out via an intraoral approach. Gross examination of the specimen revealed multiple sub-centimeter, globular, firm, creamish-white calcified nodules. Histopathological evaluation of H&E stained sections showed fibrocollagenous tissue with areas of calcification, confirming the diagnosis of calcified soft tissue lesions.

CONCLUSION

This case highlights the importance of considering soft tissue calcifications in the differential diagnosis of persistent buccal mucosal swellings. Early recognition and complete surgical excision are essential for definitive management and to rule out other potential underlying pathologies.

Key words- phleboliths, oral cavity, soft tissue calcification, Buccal mucosa nodule

INTRODUCTION

Pathologic calcified structures in oral mucosal soft tissues can represent a local nonspecific response or can represent a significant underlying pathology. Considering the rarity of such entities, it is important to differentiate them from other calcific lesions that occur in the same area namely sialoliths,dystrophic or metastatic calcifications, traumatic myositis ossificans, calcified lymph nodes, healed acne lesions, cysticercosis and pilomatrixoma[1,2] .Amongst them, phleboliths associated with vascular lesion are more frequent. Histological evaluations aided by immunohistochemistry can confirm the diagnosis although imaging techniques like plain radiographs, ultrasonography, and advanced imaging techniques like computed tomography [CT] with contrast and MRI can help in differentiating the lesions[3]

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CASE REPORT

A 18 year old female patient reported to our institute with complain of swelling over right cheek since 4 years, which was initially small and gradually increased to the present size of approx. 2×2 cm,associated with pain which was of dull aching type not radiating to any site. No history of trauma could be elicited.Intraorally ,on inspection normal mucosal surface was seen over right buccal mucosa but on palpation a well defined ,firm ,non tender movable nodule over the right buccal mucosa was identified.It was provisionally diagnosed as soft tissue Calcifications.Haemogram ,serum calcium,lipid profile were within the normal limits.Through an intraoral surgical approach,lesion was excised as shown in figure below.The specimen received was 6-7 small calcified lesions of sub cm size which were globular in shape ,firm and hard in consistency. The cut surface of specimen revealed a glistening creamish white-coloured calcifications. Studied H&E stained sections show only fibrocollagenous tissue and cellularity.At places,foci of calcifications is present suggestive of calficied lesions.

Figure 1 : Phleboliths removed via intraoral approach

Figure 2: Multiple phleboliths removed

DISCUSSION

Phleboliths are pathological ,calcified vascular thrombi formed due to stasis of blood. They are frequently found within hemangiomas and developmental malformations of head and neck region[4,5]. Isolated phleboliths can be caused by trauma and regression of childhood hemangiomas of oral mucosa[6]. Phleboliths are asymptomatic and harmless during formation but elicit clinical and radiological features after attaining a certain size. They appear as small radiopaque nodules with varying degree of densities. Their configuration reflects their growth pattern which is generally onion ring like on histology. It differs from sialoliths which are uniformly radiopaque and elongated and appear frequently in intra or extra glandular ductal system of major salivary glands but less frequently in minor salivary glands and buccal mucosa.

Utilizing anti CD34/anti CD31 antibodies in immunohistochemistry can help in distinguishing both lesions as they reveal the presence of vascular tissue with the phlebolith. The core of the phlebolith is formed from the thrombus that undergoes the calcification process which consists mainly of calcium carbonate and calcium sulphates. The onion ring appearance is caused by extension of the calcification process to the periphery with concomitant lamellar fibrosis.

Other causes are metastatic and dystrophic calcification within the oral mucosal tissue. Cysticercosis, a parasitic infection imvolving man as an intermediate host for transmission of taenia solium can also give rise to calcifications[7], although rare in oral mucosa. Interestingly, most patients present with the complaint of submucosal nodular swelling with no surface alterations of oral mucosa. Salient histological features which differentiate it from phlebolith are the presence of capsule of fibrous connective tissue around a cystic cavity containing dead cysticercus cellulosae larvae which undergoes secondary calcification and a focal collection of eosinophils among a dense inflammatory infiltrate.

CONCLUSION

Persistent clinical features along with, histopathology and immunostaining can sufficiently narrow down the diagnosis of soft tissue calcifications. In areas prone to trauma, isolated phlebolith with vascular lesion may be considered among the differentials for calcified masses in oral cavity although rare. Immunohistochemistry employing vascular tissue markers is of value in diagnosing such phlebolith not associated with vascular lesions.

DECLARATION

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Competing interests: None

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REFERENCES

1. Jaiswal AA, Garg AK, Membally R, Anand T, Mohanty MK.Ossifying pilomatrixoma with marrow formation of the left cheek region case report with review of literature. Egypt J Ear Nose Throat Allied Sci 2015;16(2):193-199.
2. Mohiuddin SA, Badal S, Doiphode A, Sultana S. Multiple supramassetric dystrophic calcinosis. Ann Maxillofac Surg 2012 Jan-Jun;2(1):74-76..
3. Hussmann J, Russell RC, Kucan JO, Khardori R, Steinau HU.Soft-tissue calcifications: differential diagnosis and therapeutic approaches. Ann Plast Surg 1995 Feb;34(2):138-147
4. Scolozzi P, Laurent F, Lombardi T, Richter M. Intraoral venous malformation presenting with multiple phleboliths.Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2003 Aug;96(2):197-200
5. Mohan RP, Dhillon M, Gill N. Intraoral venous malformation with phleboliths. Saudi Dent J 2011 Jul;23(3):161-163.
6. Gouvêa Lima Gde M, Moraes RM, Cavalcante AS, Carvalho YR,Anbinder AL. An Isolated phlebolith on the lip: an unusual case and review of the literature. Case Rep Pathol 2015;2015:507840, 5.
7. Elias FM, Martins MT, Foronda R, Jorge Oral cysticercosis: case report and review of the literature.Rev Inst Med Trop Sao Paulo 2005 Mar-Apr;47(2):95-98

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