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Case Report

SPINDLE CELL LIPOMA OF THE BUCCAL MUCOSA- A CASE REPORT

ABSTRACT

Spindle cell lipomas are a distinct variant of lipomas that occur very rarely in the oral cavity. The most common site for occurrence of this entity in the oral cavity is the tongue. The presence of spindle cells in the lesion calls for critical histopathological evaluation of the lesion. Here we present a new case of spindle cell lipoma that occurred on the buccal mucosa of a 45-year-old female patient. We provide an insight to the pathogenesis and the pathology of the entity.

Key words: Lipoma, adipocytes, mouth mucosa, CD34, mast cells.

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INTRODUCTION

Spindle cell Lipoma (SCL) is a rare, histologically distinct variant of lipoma that was first described by Enzinger and Harvey in 1975.[1] They seldom occur in the oral cavity and account for 0-9.8% of lipomas of the oral cavity.[2] Currently, in literature 44 cases of Oral Spindle cell lipomas has been reported.[3]

Oral Spindle cell lipomas usually occur in patients of an age range of 31 years to 78 years.[4] While some authors report a balanced distribution between males and females others report a male predominance for this lesion.[4,5] Oral spindle cell lipomas commonly present as a painless, well-circumscribed submucosal slow growing mass of 1 cm in diameter. They are soft in consistency and yellow in color and usually located on the lateral border of the dorsal anterior 2/3rd of the tongue.[4,6] The tongue is the most common site for Spindle cell Lipomas followed by the floor of the mouth and the buccal mucosa.[4,7.8]

Histologically, Spindle cell Lipomas are characterized by the presence of mature adipocytes surrounded by a thin fibrous capsule that originates in mature fat cells. Bland mitotically inactive spindle cells arranged parallel to the adipocytes, bundles of thick rope-like collagen, a myxoid stroma, and scattered mast cells are also components of spindle cell lipomas.[9,10,11]

The presence of spindle cells in the lesion warrants special attention and needs to be differentiated from other benign and malignant spindle cell lesions. Here we present a new case of spindle cell lipoma that occurred on the buccal mucosa and provide an insight to the pathogenesis and the pathology of the entity.

CASE REPORT

A 45-year-old female patient presented with a 1.5 cm X 1.0 cm X 0.6 cm growth on the buccal mucosa. Informed patient consent was obtained and the mass was excised and sent for histopathological examination. The gross specimen showed focal yellow and grey-white areas. Histopathological examination showed a parakeratotic stratified squamous epithelium overlying a tumor composed of mature adipocytes with bland spindle cells with wispy eosinophilic cytoplasm, mast cells, few congested vessels and collagen fragments (Fig 1, Fig 2 and Fig 3). No mitotic figures were seen. The spindle cells were positive for CD34 (Fig 4). Based on the histopathological appearance and the immunohistochemical positivity for CD34 the lesion was diagnosed as a Spindle cell Lipoma.

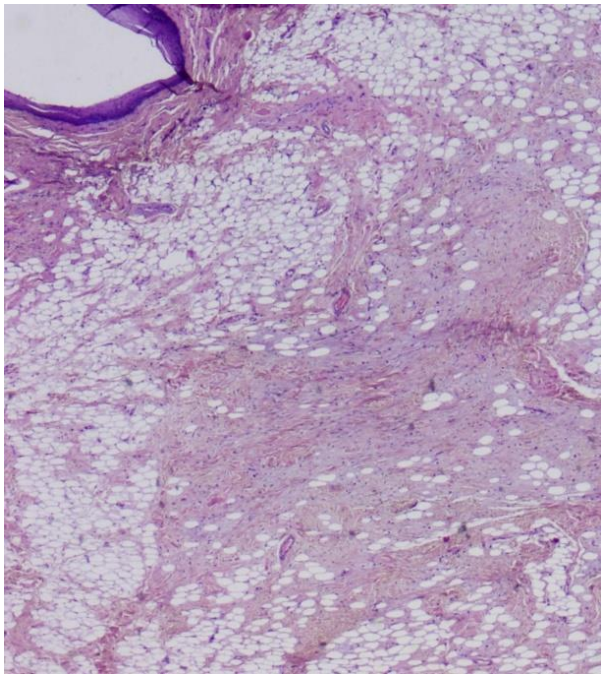

Fig 1: Photomicrograph showing mature adipocytes in cellular stroma comprising of spindle cells (H&E-10X)

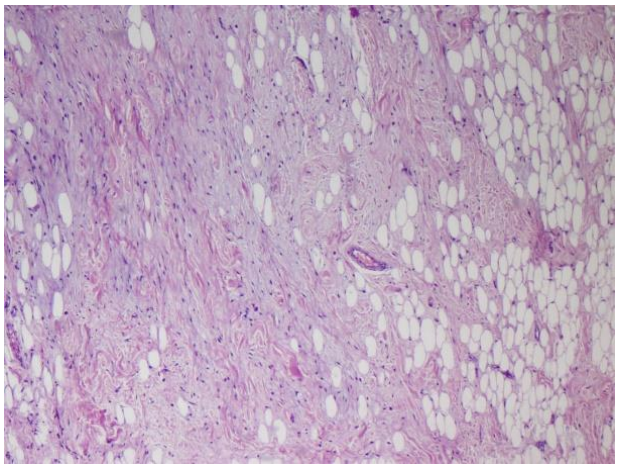

Fig 2: Photomicrograph showing mature adipocytes in a myxomatous stroma (H&E 10X)

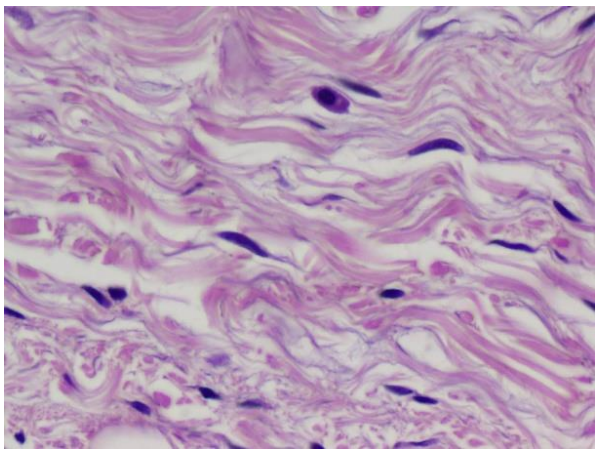

Fig 3: Photomicrograph showing bundles of rope- like collagen (H&E- 40X)

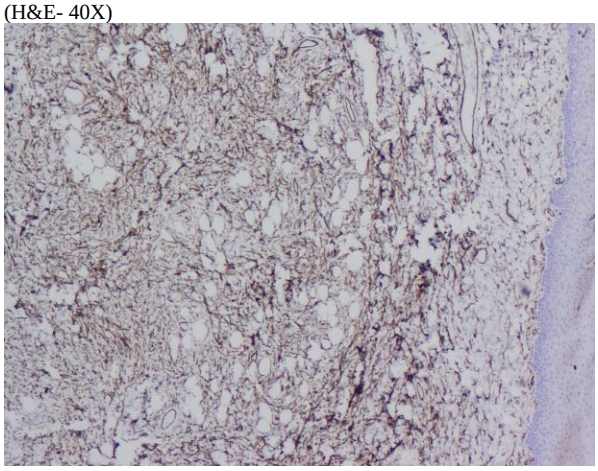

Fig 4: Photomicrograph showing the Spindle cells positive for CD34 (IHC -40X)

DISCUSSION

Oral spindle cell lipomas are rare lesions Among the 44 cases of SCL reported so far, twelve cases occurred on the buccal mucosa (Table 1). Among the 12 cases of spindle cell lipomas that occurred on the buccal mucosa, 10 of them occurred in males and 2 occurred in females. In this report the patient is a 45-year-old female. The size of the lipomas occurring in the buccal mucosa ranges from 10 mm to 50 mm. It has been noted that many patients who present with spindle cell lipomas are diabetic and hypertensive patients as well.

Table 1. Twelve reported cases of Spindle cell lipoma of the buccal mucosa[18]

Author /Year	Age (Y)	Gender	Location	Size (mm)
Tosios et al 1995	55	M	Buccal Mucosa	40
Khoo and Lian, 1995	23	M	Buccal Mucosa	50
Piatelli et al 1999	75	M	Buccal Mucosa	20
Piatelli et al 2000	63	M	Buccal Mucosa	25
Agoff et al, 2001	61	F	Buccal Vestibule	30
Kawasaki et al 2006	42	F	Buccal Mucosa	50
Billings et al 2006	88	M	Buccal Mucosa	10
Vecchio et al2009	52	M	Buccal Mucosa	25
Calderia et al 2011	38	M	Buccal Mucosa	50
Chandrashekar et al 2012	58	M	Buccal Mucosa	10
Manor et al 2013	43	M	Buccal Mucosa	25
Miloro et al 2015	**71**	**M**	**Buccal Mucosa**	**35**

This lipomatous lesion comprises spindle cells, adipocytes with collagenous and occasionally a mucinous matrix in a spectrum of variation among these components.[1] Although the cellular nature of the tumor is similar to several benign mesenchymal tumors the ropey- collagen bundles are an unique feature of SCL.[12]

The spindle cells in the tumors arise from fibroblasts or are similar to the stellate

mesenchymal cells of the primitive fat lobules.[1,13,14] Yet, other investigators have suggested that spindle cells are actually immature mesenchymal cells that remain in position during the transformation to mature lipocytes and are capable of synthesizing only collagen at an early stage.[15]

The main differential diagnosis for Spindle cell lipoma is a well-differentiated Liposarcoma (WDL). While the spindle cells in SCL have an orderly appearance without pleomorphism and scarce mitotic activity, the multivacuolated pleomorphic adipocytes are the components of WDL. In addition the WDL exhibits a prominent plexiform capillary pattern.[15,16,17]

Cytogenetic analysis of the cells in spindle cell lipoma has shown a characteristic karyotypic aberration, notably loss of material from the long arm of chromosomes 13 and 16. These changes are also seen in pleomorphic lipoma.[18]

The treatment of choice for SPL is surgical excision. The prognosis for oral spindle cell lipomas is good. Recurrences are rare and are encountered only when the lesion is infiltrating and invading the surrounding muscle.

CONCLUSIONS

Spindle cell lipoma is benign slow growing soft tissue neoplasm that rarely occurs in the oral cavity. Although a benign lesion, spindle cell lipomas can grow to a large size. Histologically the lesion typically comprises mature adipocytes and spindle cells. Immunopositivity for CD34 by the spindle cells in the lesion helps in confirming the diagnosis.

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CONFLICTS OF INTEREST STATEMENT

None

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