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SPINDLE CELL LIPOMA OF RIGHT FACE – A RARE CASE REPORT

Oral Pathology

Dr Sonal Lahoti	MDS Oral Pathology and Microbiology
Dr Bipin Kumar*	MD General Pathology *Corresponding Author
Dr Jawed Mohammad Iqbal	MDS Oral Surgery
Dr Nivedita	MDS Pedodontics
Dr Devika	MDS Oral Medicine and Radiology
Dr A.K Sharma	MDS Periodontics
Dr Sanjay Kumar	MDS Orthodontics

ABSTRACT

Lipoma is a benign subcutaneous and submucosal tumour. Its presentation varies in size , shape , depth and colour. Histopathology remains the gold standard in the diagnosis of these tumors with complete surgical excision being the treatment choice. Different variants of lipoma have been classified depending upon the histologic features. We present case of a spindle cell lipoma of right mid face region in a young female patient excised through an intra-oral approach.

KEYWORDS

Spindle cell lipoma , mid-face , intra-oral approach

INTRODUCTION-

Lipomas are benign mesenchymal soft tissue neoplasms composed of adipose tissue. The peak age of incidence is usually in the 5th or 6th decade of life.[2] In most cases the size of the lesion is less than 3 cm at the time of diagnosis ,but can increase up-to 5-6cm over a period of years.2 They are very rare in the maxillofacial region equating to 15-20% of cases and are more common in intra-oral than extra-oral locations.[2,3]. They account for 1-5% of all benign tumors of the oral cavity with cheek being the most common site followed by tongue , floor of mouth ,buccal sulcus and vestibule.[2,3] .They are asymptomatic ,slow growing , smooth surfaced , lobulated usually well circumscribed and encapsulated , sessile or pedunculated submucosal masses.[8] Lipomas may be either superficial or deep,with the former being more common .[4] Roberts et al. further classified the superficial palpable fatty masses into encapsulated and unencapsulated. The deep lipoma is usually larger and deforms the surrounding tissue as compared with superficial lipomas, which are generally more circumscribed. The subfascial or deep lipomas can be classified as parosteal, interosseous, or visceral and intermuscular or intramuscular.[4] Multiple head and neck lipomas have been observed in neurofibromatosis, Gardner's syndrome, Encephalocraniocutaneous lipomatosis, multiple familial lipomatosis and proteus syndrome[6].

CASE REPORT :

A 19 year old female patient reported to the Department of Dentistry IGIMS with the chief complaint of painless swelling on right side of the face since 1 year. Patient gives history of trauma from bicycle 2 years back at the right mid facial region. Initially the trauma site was asymptomatic , however a small swelling then appeared after 1 year which increased gradually to attend the present size resulting in facial asymmetry. Extra -oral examination revealed an ill defined swelling extending anteroposteriorly from right nostril to 3 cm away from the earlobe and superoinferiorly 1 cm below the infraorbital margin till alatragus line measuring approximately 3 * 4 cm. Swelling was also seen elevating the right nostril. (Fig-1) On palpation , the swelling was non tender and soft in consistency. Intraorally vestibular obliteration of labial mucosa wrt 12,13,14 was seen without any change in surface color. (Fig-2) Based on the clinical examination , a provisional diagnosis of benign soft tissue tumor was given. Patient was then sent for further radiological investigations . Orthopantomography did not reveal any finding. On ultrasonography ,well demarcated rounded low density cystic lesion measuring approx 3.2 cm *3.5cm*2.3 cm was seen predominantly involving the right nasolabial region and extending upto infraorbital foramen cranially suggestive of nasolabial cyst. To determine the size and the degree of infiltration in the adjacent tissue , a CT scan was done (Fig-3). A fine needle aspiration from the swelling was performed. The cytological smear showed round to oval glandular epithelial cells and myoepithelial cells in clusters along with fibromyxoid stroma in the background suggestive of pleomorphic adenoma. Subsequently complete excision of the growth using intraoral approach under general anesthesia with orotracheal intubation was performed. Maxillary vestibular incision in relation to 11 to 16 was given. Full thickness mucoperiosteal flap was raised and bone was exposed. The blunt end of the mucoperiosteal elevator was used and the lesion was dissected from the adjacent bone. The removed tissue was well encapsulated , yellowish in color ,(Fig-4) soft in consistency with lobulated surface and was found to be floating in formalin containing jar (Fig-5).The specimen was then sent for histopathological evaluation. Grossly it appeared fibrofatty .The H and E stained tissue section revealed mature fat cells interspersed with spindle shaped cells in a myxoid matrix , with moderate vascularity (Fig-6 , Fig-7 , Fig-8) arriving to a confirmatory diagnosis of Spindle cell lipoma.

Fig-1

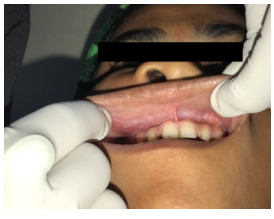


Fig-2

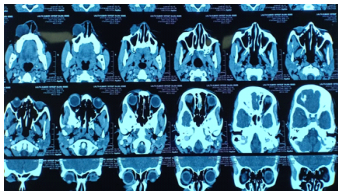


Fig-3

Fig-4

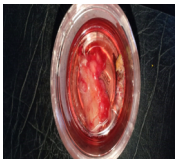


Fig -5

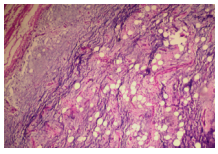


Fig -6

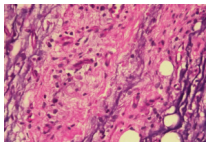
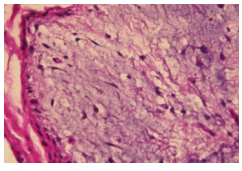


Fig-7



Fig—8

DISCUSSION

Lipomas are called universal or ubiquitous tumors, owing to the extensive literature on lipomas found in almost all locations[11] The usual presentation is in a subcutaneous location with distinct separation from the surrounding tissues, which can be appreciated by the relatively easy detachment from surrounding tissues during excision.[11] Though the etiology of these tumors is not understood, various theories have been put forward ,These include hereditary, hormonal imbalance, fatty degeneration, trauma induced, metaplasia of muscle cells, lipoblastic embryonic cell nest origin, chronic irritation, irradiation, infarction, infection and induction by undifferentiated mesenchymal cells among others.[7] Imaging evaluation of soft-tissue tumors has undergone a dramatic evolution. Plain radiographs show hypertrophy of facial bones and soft tissue swelling. USG may show adipose tissue but cannot delineate the real extent of the lesion. [10]CT scan and MRI are the modalities of choice as they can identify the fat content of the lesions and delineate their extent. CTscan shows fat-density lesions with exquisite detail.The intervening fibrous elements can give a feathery pattern or inhomogeneous character. [10] MRI, with its multiplanar capability, is superior to CT. It can depict the exact extent of the lesion. The lesions are inhomogeneously hyperintense on T1W images. Muscle and bony involvement are better seen with MRI.[10]

The bulk of benign lipomatous tumors may be grouped into five categories each of which may be further divided[12]

1) Lipoma
2) Variants of lipoma
3) Lipomatous tumors or hamartomatous lesions
4) Infiltrating or diffuse neoplastic or nonneoplastic proliferations of mature fat
5) Hibernoma

Benign lipomatous tumors have been subclassified according to their histologic features and growth patterns into classic lipoma (solitary or multiple), fibrolipoma, angiolipoma, infiltrating lipoma, spindle cell lipoma , myxoid lipoma , intramuscular lipoma, hibernoma, pleomorphic lipoma, lipoblastomatosis and diffuse lipoblastomatosis.[3,9]. Of these, the Simple lipomas and Fibrolipomas are the commonest. The fibrolipoma is characterized by a significant fibrous component intermixed with the lobules of fat cells. The angiolipoma consists of an admixture of mature fat and numerous small blood vessels. Myxoid lipoma exhibits a mucoid background and may be confused with myxoid liposarcomas. Pleomorphic lipomas are characterized by presence of spindle cells and bizarre hyperchromatic giant cells. Intramuscular lipomas are often more deeply situated and show an infiltrative tendency, extending between skeletal muscle bundles .[7]

Spindle cell lipoma was originally described by enzinger and Harvey in 1975. The lesion arises mainly in men 45-60 years of age in subcutaneous tissue of the posterior neck , shoulder and back. Scl have characteristic cytogenetic abnormalities with loss of 16q material[12] SPL is histologically characterized by the presence of an admixture of mature fat cells, uniform spindle cells, and short bundles of collagen associated with the spindle cells. Macroscopically, the tumour resembles a simple lipoma except for gray–white gelatinous foci representing the areas of spindle cell formation.[13] The microscopic features of spindle cell lipomas range from tumours predominantly composed of mature fat cells, with a moderate amount of myxoid material and widely scattered spindle cells, to cellular lesions containing numerous spindle cells, thick bundles of collagen, and a small number of mature fat cells.[13]The extent of replacement of fat cells by spindle cells varies from one case to another. Spindle cells are characterized by uniformity, having a single elongated nucleus, bipolar cytoplasmic processes, and typically containing one or two vacuoles within the cytoplasm.[1] No lipoblastic activity is observed in spindle cell lipoma, and mitotic figures are seldom seen[1] IHC the spindle cells stain strongly for vimentin. S-100 protein does not mark the spindle cells but mature lipocytes show strong peripheral immunoreactivity for this antigen. Almost all tumors are strongly positive for CD34[12] Most lipomatous lesions do not present any particular diagnostic problems; nevertheless, a group of fatty tumors, including infiltrating lipoma, pleomorphic lipoma, spindle cell lipoma, and lipoblastoma, may cause considerable diagnostic difficulties and may be mistaken for liposarcoma[9]. Myxoid liposarcomas, the most common variety of liposarcoma, can be mistaken for spindle cell lipoma due to the plexiform vascular pattern but spindle cell lipoma is more circumscribed and superficially located , lacks lipoblasts and is characterized by ropey collagen bundles[12].

Differentiation from normal adipose tissue is based on the appearance of a circumscribed often encapsulated lesion with absence of vascularity. Lipoma is different from normal body fat in that its lipids are not available for metabolism , and it has been suggested that this fact , together with its autonomous growth may warrant its classification as a true benign neoplasm.[5] The adipose cells in a lipoma are usually much larger than in normal adipose tissue and may be upto 200 micron in size. [7] Cartilaginous or osseous metaplasia is rare and may be seen in lipomas of large size and long duration. Secondary changes may occur as a result of trauma or infection which would cause necrosis and liquefaction of fat leading to formation of lipid cysts.[7] Such cases would also show the presence of multinucleated giant cells, indulging in phagocytic activity accompanied by predominantly lymphocytes and a few plasma cells[7]

CONCLUSION

Well encapsulated lipomas generally shell out with ease without any damage to the surrounding structures with minimal chances of recurrence. The intra-oral approach was used to avoid extra oral scar formation. A definitive diagnosis of SCL depends on the correlation between the histological and clinical features.The prognosis of this tumor is usually considered good.

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