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Case Report

Intraoral Angiolipoma a case report

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ABSTRACT

A lipoma variation with a noticeable vascular component is called angiolipoma. It is the most prevalent tumour in the forearm, followed by the trunk and young people's extremities. It is uncommon for it to arise in the head and neck area. The clinical and histopathologic characteristics of angiolipoma that developed on a 40-year-old female are presented in this study. Increased mast cell density surrounding blood vessels is shown using toluidine blue stain, suggesting a possible involvement for these cells in vasculogenic.

1. Introduction

A benign (noncancerous) tumour consisting of fat tissue is known as lipoma. They are often painless, movable, and soft to the touch. The majority of the time, they only go deeper than the skin. The majority are smaller than 5 cm (2.0 in). Angiolipoma (AL), a tumour more frequently found in the forearm and trunk areas, is a very uncommon tumour of the head and neck. In the oral cavity, this tumour has very occasionally been reported.[1]

2. Case Presentation

A 40 year-old female patient, was referred to the Department of Oral Medicine and Radiology. On further probing of history patient gives history of a growth present in relation to the right cheek for the past 5years which gradually increased to the present size. Patient is asymptomatic. On intraoral examination, a single well defined, approximately oval shaped, sessile, bluish coloured growth is present in relation to the right buccal mucosa, approximately 1x0.8cm in size. (Figure 1) It extends anteriorly 1.5cm short of commissure to posteriorly 3cm short of the retromolar region, superiorly 3cm short of the upper sulcus and inferiorly 2cm short of the lower sulcus. On palpation it is nontender and soft in consistency. Diascopy test is positive.

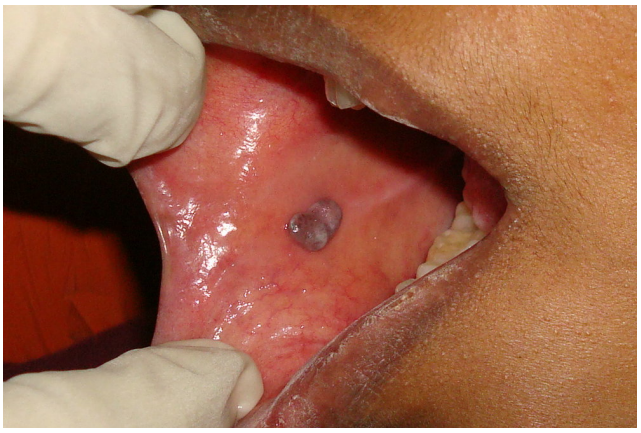

Figure 1: Clinical picture of angiolipoma on right buccal mucosa

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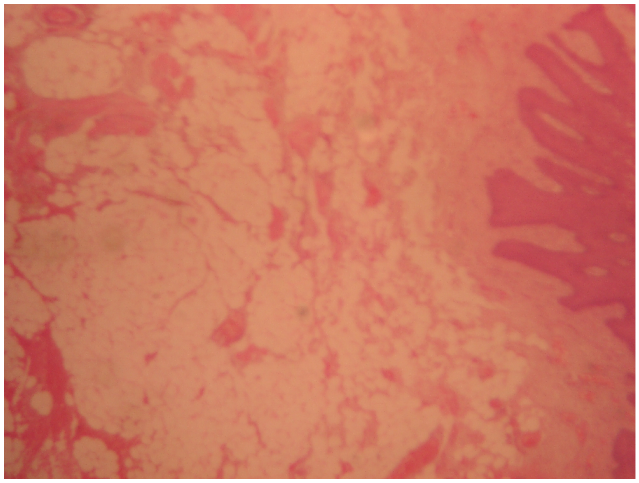

Figure 2: Histopathological picture of angiolipoma

3. Clinical Procedures and Outcomes

Histopathological report section shows peripheral parakeratotic stratified squamous epithelium. The underlying connective tissue shows dense collagen bundles and lobular deposition of adipose tissue, dilated blood capillaries along with extravasation of RBC's.Biopsy was also done.

4. Discussion

It is usually believed that benign lipomatous tumours are a frequent type of neoplas with few symptoms or consequences and low diagnostic complexity. The tumour most frequently found in fat tissulcuslipoma. The head and neck, notably the cheek, tongue, palate, parotid gland, neck, and larynx, are home to a staggering 13% of all lipomas However, the oral cavity is only involved in 1% to 4% of instances. Of all benign neoplasms of the oral cavity, oral lipoma makes up 0.5% to 5% The buccal mucosa is the most common location for these typically asymptomatic, slow growing, soft, and well-circumscribed lesions.

Even though lipomas are all made of fat, ther are numerous subtypes depending on microscopic examination. Among them are.

1. Conventional lipoma, or mature, common white fat.
2. Hibernoma, which is brown fat rather than the typical white fat.
3. Fat plus fibrous tissue is called fibro lipoma.
4. Angiolipoma (high blood vessel density combined with fat.
5. Myelolipoma (tissue that produces blood cells + fat.
6. Spindle cell lipoma, a fat mass containing rod-shaped cells.
7. Pleomorphic lipoma, a fat mass containing a variety of shaped and sized cells.
8. Atypical lipoma (higher cell count and deeper fat.

An angiolipoma is a benign mesenchymal tumour made up of mature lipocytes with dilating blood vessels. Howard & Helwig first described these tumours in 1960. It is tiny, rubbery tumour called an angiolipoma develops beneath your skin and contains blood arteries. Usually between the ages of 20 and 30, angiolipomas appear in young people. Your forearms are where they typically appear, and touching them can hurt The trunk and extremities of young people are where angiolipoma, a histologic variation of lipoma, most frequently develops [2,3]

Most lipomatous tumors fall into one of four categories: Easily the most prevalent mesenchymal neoplasm is superficial lipoma, a tumor of mature fat that arises in the superficial (subcutaneous) soft tissues. Deep lipomas originate in tissues that extend below the subcutis, or they are closely linked to particular anatomical locations. [4]

This group's primary subgroups include angiomyolipoma,

1. Lipomas of the tendon sheath,
2. Intramuscular and intermuscular lipomas,
3. Neural fibro lipomas with or without macrodactyly.
4. Lumbous sacrum lipomatoma.

Unknown is the pathogenesis of this condition. Trauma is frequently mentioned as a potential etiologic component. Incidence within families has reportedly increased. But there is still debate over the cause of angiolipoma. According to many views, a lipoma differentiates as a result of an unidentified stimulus, The tumor is congenital and of neurogenic origin. Potential causes include hyperplasia of fat with a matching increase in vascular channels, a real tumour, or a central haemangioma that has become a fat mass. There is evidence to support the theory that an AL initially starts as a congenital lipoma and then undergoes vascular growth. According to Howard and Helwig, multipotent cells that are sequestered in the embryo become hormone-activated during puberty and develop into a straightforward lipoma. [5]

It has been proposed that mast cells mediate angiogenesis in a number of pathological situations. Mast cells have been suggested to contribute to their improved vascularity. AL had ten times more mast cells than conventional lipomas. Vascular endothelial growth factor is expressed extensively by mast cells around blood vessels in angiolipoma. It is widely known that this growth factor is crucial for endothelial cells in angiogenesis.

4.1. AL has two histologic types

1. Infiltrating
2. Non-infiltrating

The most common type is non-infiltrating. It rarely happens before puberty and in adolescent individuals, it

frequently presents as unpleasant or painless subcutaneous nodules. In 79% of instances, non-infiltrating AL occurs at numerous sites. Histologically, it is encapsulated and consists of a proliferation of thin-walled vascular channels mixed in with mature adipocytes. Typically, older people are diagnosed with infiltrating AL. They extend into the surrounding tissue and have a tumor mass that is not encapsulated. They are available in two anatomical types: intramuscular and intermuscular. A definitive diagnosis requires microscopic investigation. The most recent histopathological recommendations for AL diagnosis are listed below.[6,7]

1. Both weakly and well-encapsulated (non-infiltrating ALs and infiltrating ALs are possible
2. 50% of the tumor's mature adipocytes are visible
3. Angiomatous growth interspersed throughout the tumor
4. Microthrombi with fibres
5. Lack of pleomorphism or other mesenchymal features (smooth muscle (Figure 2)

A few histological differential diagnoses are lipoma, haemangioma, angiomyolipoma, infiltrating lipoma, angiofibrolipoma, angiomyolipoma, and liposarcoma. A haemangioma does not include any lipomatous tissue. Angiomyolipoma is characterized by varying quantities of smooth muscles, fat cells, and blood arteries. An infiltrating lipoma occurs when lesional fat tissue invades deeper tissue in the form of long, thin streaks extending from the intertumoral mass. Angiofibrolipoma is characterized by varying quantities of fat cells, fibrous tissue, and blood vessels. Angiomyolipoma's are adipose tissue changes with myxoid growth and blood vessel growth. This benign kidney tumor is the most common type and has a tight relationship to tuberous sclerosis.[8] Although the presence of microthrombi makes this differentiation possible, it may be challenging to distinguish the hypo vascular lesions from regular lipomas.[9]

The AL has not been found to spontaneously regress; rather, it has been shown to continue growing, in contrast to other entities such as a haemangioma. The preferred course of treatment for an AL that is not invading is surgical excision, whereas an infiltrating AL has been suggested for a large local excision with free margins. Radiation therapy can be required in the event that the resection was insufficient.[10] According to reports, whether or not an AL recurrence is caused by an invading mass. There have been reports of infiltrating ALs being more prevalent in older age groups. In regions other than the head and neck, their recurrence rate has been estimated to be as high as 62.5%. Younger age groups see noninfiltrating kinds more frequently, and they don't likely to recur.[8]

5. Conclusion

In a nutshell the majority of oral cavity neoplasms, ranging from 1% to 4%, are lipomas. The majority of the time, they are superficial or submucosa lesions that are asymptomatic, slow-growing, soft, and well-circumscribed. The head and neck area rarely experiences ALs. It is made up of fully developed adipocytes and connective tissues that are scattered throughout vascular arteries that have mast cell infiltration and fibrin thrombi. The diagnosis must be confirmed by a histopathological examination. Vasculogenic and mast cells may be related, according to some theories. A large surgical excision offers a good prognosis and a nearly non-existent relapse rate, making it the therapy of choice with free margins.

6. Source of Funding

None.

7. Conflict of Interest

None.

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