Journal for Re Attach Therapy and Developmental Diversities
eISSN: 2589-7799
2024 February; 7(2): 80-84

Oscc - An Inducing Factor To Xanthogranulomatous Inflammation Of Lymph Node- A Case Report

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Abstract

Xanthogranulomas are a type of non-Langerhans cell histiocytosis that commonly affects infants and children. Adult xanthogranuloma are rare disorders which is characterized by the accumulation of macrophage, dendritic cells, or monocyte-derived cells in various tissues of the body. Morphologically, most of the cases presented classical histological features of xanthogranuloma, with histiocytic cells consistent with the non-Langerhans cell immunophenotype. This xanthogranulomatous inflammation usually occurs either due to metastases from the primary malignancy to the lymphnode or due to any foreign body contamination. In this article we present a case of a 45-year-old male patient who was initially diagnosed with a malignant condition later developed a benign condition of the lymph node.

KEYWORDS:- Granulomatous inflammation, lymph node, malignancy.

INTRODUCTION

The most common malignancy of the oral cavity is oral squamous cell carcinoma (OSCC), which accounts for about 80–90% of all malignant neoplasms of the oral cavity. The major risk factors and etiologies of OSCC are UV radiation exposure, drinking alcohol, and smoking, many additional variables have also been linked, including nutritional inadequacies, genetic predisposition, and infections with the human papillomavirus (HPV) and Candidal species. OSCC is a disease that primarily affects adults and the elderly, in which the prevalent clinical feature is an ulcerated lesion with a raised rolling border surrounding a necrotic center area. [(1)]. OSCC if not diagnosed earlier may lead to metastasis and also if not properly treated with appropriate surgical management can cause infestation of foreign bodies into lymph nodes which may lead to a condition called Xanthogranuloma. It is a benign tumour that occurs in the head, neck, trunk, and extremities of infants and young children, and it presents with numerous yellow-brown papules which is several millimetres in diameter. This disease is a type of non-Langerhans cell histiocytosis (non-LCH) and is classified as non-LCH of the skin and mucosa according to the revised classification of histiocytosis and neoplasia of the macrophage–dendritic cell lineage. Adult-xanthogranuloma is rare and is called adult-type xanthogranuloma [(2)]
Xanthogranuloma of lymph node is an unusual type of granulomatous lymphadenitis, initially suspected of being a malignant lymphoma. They are well differentiated by the presence of numerous foamy histiocytes which exhibit varying degrees of vacuolization of cytoplasm and Touton-type multinucleated giant cells, a feature of Xanthogranuloma. [(3)]
The most common area of occurrence of Xanthogranulomas are the skin, predominantly the scalp, and face, followed by the trunk, upper extremities, and lower extremities. [(4)] Histopathological examinations are important for proper diagnosis. However, physicians should exercise concern not to miss a malignant pathology that could lead to metastases.

In our case, after an initial diagnosis of OSCC, the condition was surgically managed due to improper follow-up and poor hygiene maintenance at the surgical site which led to foreign body associated Xanthogranuloma of lymph node. [5]

CASE REPORT

A 45-year-old male patient reported to our out-patient department with a chief complaint of growth and pain in the left side of the tongue for past one month with difficulty in speaking, and chewing food since then. The growth on the tongue developed one month ago, it was of small size initially, but started increasing in size gradually. Initially, the growth was asymptomatic but later intermittent episodes of moderate pain was present; radiating to the left ear and temporal region, and the episodes of pain were triggered after chewing food. The discomfort was severe when hard foods were consumed. The patient's medical history was non-contributory. The patient was known alcoholic for the past 25 years and also had a habit of betel nut chewing and tobacco pouch placement under the vestibule for the past 25 years and quit the habit before three years.

On general examination there were no abnormalities detected. On lymph node examination, submandibular group of lymph nodes were palpable. On intraoral hard tissue examination, the patient had poor oral hygiene and partially edentulous maxilla.

In soft tissue examination, on inspection there was an ulcero-proliferative growth of size approximately 3x2 cm was seen on the left lateral border of tongue extending superior-inferiorly from the dorsal surface of tongue to approximately 1.5cm from lateral border of tongue along the ventral surface and anterio-posteriorly along 35,36 with overlying erythematous mucosa. On palpation all inspectory findings are confirmed with site, size, shape and extent. Tenderness was present and it was firm in consistency with no evidence of blood or pus discharge. With these clinical findings, the provisional diagnosis of non-healing ulcer of lateral border of tongue.

FIGURE 1 shows ulceroproliferative growth in the left lateral border of tongue

For further investigation, the patient was sent to the Department of oral and maxillofacial surgery for an incisional biopsy which revealed infiltrating squamous cell carcinoma – left lateral border of tongue. The patient was again sent to the department of oral and maxillofacial surgery for surgical management Left hemiglossectomy with selective neck nodes dissection was done and excised specimen was sent for histopathological examination. The histopathological features confirmed the diagnosis of well differentiated oral squamous cell carninoma of the lateral border of tongue with the pathological staging of pT_1N_0.

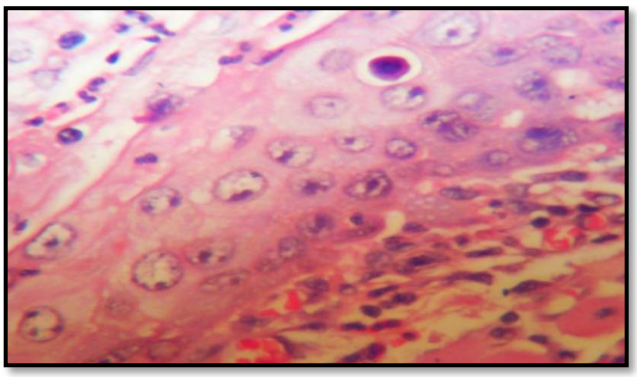

FIGURE 2 shows keratin pearl formation

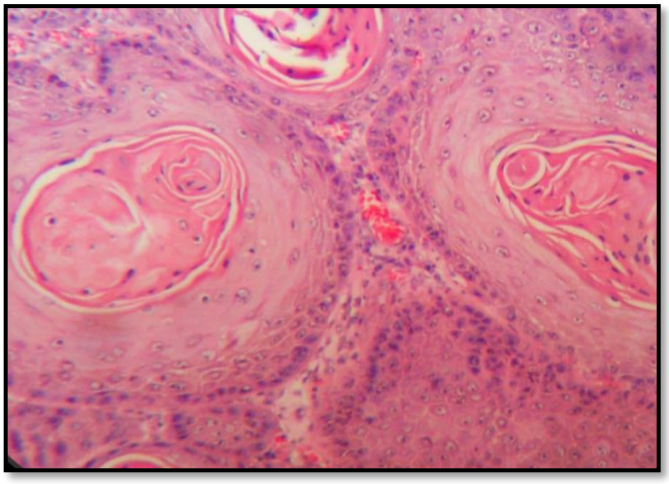

FIGURE 3 shows lymphoplasmacytic infiltrate with foreign body granulomatous inflammatory response

The patient was under regular followup and after 1 month of the surgery the patient reported back with the complaint of pus discharge at the surgical site. FNAC investigation was done at the left side of the neck and sent for examination. Cellular examination showed sheets of dense inflammatory infiltrate comprising of neutrophils, lymphocytes, plump histiocytes and cyst macrophages admixed with foreign body like giant cells and karyorrhectic debris in a necrotic background. Occasional aypical cell clusters with moderate eosinophilic cytoplasm and pleomorphic hyperchromatic nuclei amidst the inflammatory infiltrate were seen. These findings suggested of metastatic carcinomatous deposits with superimposed suppurative granulomatous inflammation. The necrotic lymph node was then removed and was sent for histopathological examination for confirmative results.

FIGURE 4 shows necrotic lymph node

The excised lymph node showed features of fibro collagenous tissue with attached skeletal muscle bundles and adjacent haemorrhagic cystic lesion enclosing refractile foreign body material surrounded by sheets of foamy histiocytes, lymphocytes. plasma cells, neutrophils anal numerous multinucleated foreign body giant cells along with hemosiderin laden macrophages. Also seen were many hypertrophied nerve bundles within the fibro collagenous stroma along with five reactive lymph nodes exhibiting sinus histiocytosis. With these histopathological findings a confirmatory diagnosis of foreign body associated Xanthogranulomatous inflammation of lymph node was given and the patient was under regular follow up to prevent further infection.

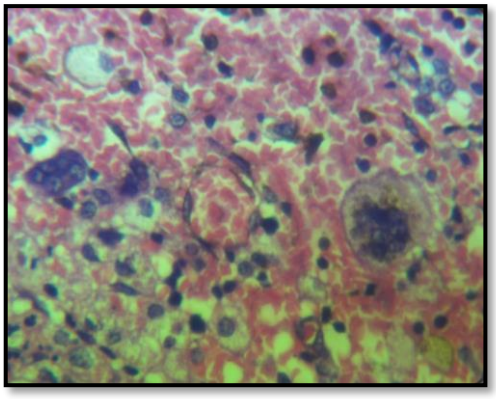

FIGURE 5 shows fibro collagenous tissue with attached skeletal muscle

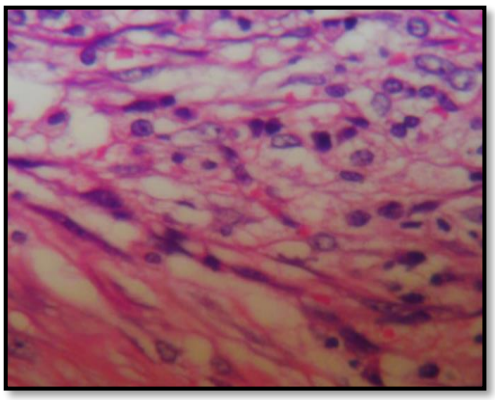

FIGURE 6 shows foamy histiocytes, lymphocytes, plasma cells, neutrophils and numerous multinucleated foreign body giant cells

DISCUSSION

Oral cancer includes a group of tumors that affect the oral cavity, pharyngeal areas and salivary glands. However, the term is used interchangeably with oral squamous cell carcinoma (OSCC), which is the most common of all oral tumors. More than 90% of all oral tumors are estimated as OSCC. It is the most common malignant epithelial tumor affecting the oral cavity. In males, the incidence and mortality rates are 6.6/100,000 and 3.1/100,000, respectively, while in females the same percentages are 2.9/100,000 and 1.4/100,000. OSCC is increasing in young white men aged 18 to 44 years, especially among white women. OSCC patients have a 5-year survival rate of 40-50%. Despite the fact that the oral cavity is easily accessible for clinical examination, OSCC is usually diagnosed at an advanced stage. [(6)] The most common sites of OSCC are the tongue, lips, and floor of the mouth. Some OSCCs arise in apparently normal mucosa, but others are preceded by clinically apparent malignant lesions, particularly erythroplakia and leukoplakia.

OSCC usually presents as an ulcer with fissures or raised exophytic edges. It can also appear as a nodule, a red lesion (erythroplakia), a white or mixed white and red lesion, nonhealing discharge, or an enlarged cervical lymph node characterized by hardness or adhesions. OSCC should be considered if any of these features persist for more than two weeks. OSCC if not diagnosed earlier may lead to metastasis and also if not properly treated with appropriate surgical management and regular followup can cause infestation of foreign bodies into lymph nodes which may lead to a condition called Xanthogranuloma. Xanthogranulomas are the most common form of non-Langerhans cell histiocytosis. Both adult and childhood forms have been described. In adults, xanthogranulomas have been associated with multiple possible risk factors, including trauma, infection, and malignancy. [(7)] Xanthogranulomatous inflammation is histopathologically characterized by a marked proliferative fibrosis, parenchymal destruction, and infiltration of foamy histiocytes intermixed with other inflammatory cells. [(8)]

They are benign histiocytic cell tumors that resolve spontaneously. Xanthogranulomas are usually benign as asymptomatic reddish-yellow papules that can grow up to 1 cm in diameter and progress to brownish plaques. The lesions are firm and rubbery, and superficial telangiectasia may occur. Larger lesions (2–3 cm in size) have been reported, and ulcers and satellite lesions have been described. Resolution occurs spontaneously over months or years, leaving small atrophic scars. Lesions in adults have also been shown to resolve spontaneously, although this is rare. [(9)] In

this case report the patient presented with the painful Ulceroproliferative growth which was seen in the lateral border of the tongue and with clinical and histopathological correlation it was diagnosed to be Oral Squamous Cell Carcinoma of the posterior border of the tongue and then the patient was surgically managed and was under follow up.
After one-month post-surgery, the patient reported back with the complaint of pus discharge from the surgical site and for the investigation purpose FNAC was performed and was sent for cytological examination which revealed features highly suspicious of metastatic carcinomatous deposits with superimposed suppurative granulomatous inflammation. Necrotic lymph node was surgically excised and sent for histopathological examination and those histopathological features were correlated with the characteristic features of the Xanthogranuloma by which we came to a conclusive diagnosis of foreign body associated Xanthogranulomatous inflammation of the lymph node.

CONCLUSION

Squamous cell carcinoma is the most prevalent and most aggressive oral malignancy, so earlier diagnosis is very important. If there is no earlier diagnosis it might lead to metastasis to the other part of body and also surgical management of lesion with prior follow up is also an important criterion. In this case there was failure of proper follow up of the patient and improper hygiene at the surgical site which led to pus discharge and foreign body infestation of the lymph node, thereby leading to xanthogranulomatous inflammation. So early diagnosis with proper surgical management and follow up plays the main criteria in treating malignancies and for better prognosis.

ANONYMITY
Financial support and sponsorship: Nil

Conflicts of interest: Nil

Acknowledgements: Nil

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