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Short Communication

Decoding Oral Cavity Lesions: Identifying Cancerous and Non-Cancerous Lesions

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Abstract

Oral lesions are common abnormalities that affect the tissues in the oral cavity, including the lips, tongue, cheeks, and gums.[1] These lesions can be categorized into two main types: cancerous and non-cancerous. While both types may present similar symptoms, their underlying causes, treatment approaches, and prognoses differ significantly. Identifying and differentiating these cancerous lesions from non-cancerous ones aids in planning the treatment and preventing the metastasis of the cancerous lesions from the oral cavity to various other organs.

Keywords: oral cavity; non-cancerous oral lesions; cancerous oral lesions; metastasis; keratinisation

Main Body

The occurrence of cancerous and non-cancerous lesions of the oral cavity is increasing especially in South Asian countries due to the habits of smoking cigarettes and chewing betel nut.[2] Also, the consumption of various other commercially available forms of betel nut and tobacco has caused a rise in the number of such cases.[3] Thus, the role of medical healthcare professionals is crucial in diagnosing and treating these cancerous and non-cancerous lesions which are increasing in numbers as well as life-threatening.,

Non-Cancerous Oral Lesions

Non-cancerous oral lesions, also known as benign lesions, are abnormal tissue growths that are not cancerous and do not spread to other parts of the body. They can manifest in various forms, including ulcers, sores, lumps, and discolouration. Some common types of non-cancerous oral lesions include papilloma, canker sores, oral thrush, leukoplakia, erythroplakia and fibromas. Oral squamous papilloma is caused by papillomavirus type 6 and 11. The lesion appears as an exophytic growth from the surface of oral mucosa and has several papillary or finger-like projections.[4] The lesion can be easily demarcated from the surrounding tissue. The base of the lesion is pedunculated in most cases but can also be sessile in some of cases. The lesion does not cause pain and varies in size from a few millimetres to several centimetres. Treatment of oral squamous papilloma is usually by excising the entire lesion along with the base of the mucosa on which the lesions rest. These lesions will not recur if the excision is done properly. Oral fibroma is one of the most

common non-cancerous lesions of the oral cavity. They often appear as small, raised nodules and can occur anywhere in the mouth. Trauma or irritation to the oral tissues is a common cause of fibroma formation.[5] It commonly occurs on the buccal mucosa and may have a sessile or pedunculated base. The surface is usually smooth and the diameter may be about a few centimetres. They are slow growing in nature and are well-circumscribed. Management of oral fibroma involves excision of the mass and is rarely recurring. Canker sores, or aphthous ulcers, are small, shallow ulcers that develop on the soft tissues inside the mouth. They are often painful and can be triggered by stress, hormonal changes, or certain foods. Oral thrush, caused by the Candida fungus, appears as white or cream-coloured patches on the tongue, inner cheeks, or roof of the mouth. It is commonly seen in individuals with weakened immune systems, such as those with HIV/AIDS or undergoing chemotherapy [6]. Leukoplakia [7] is most commonly described as a “potentially malignant lesion” because the transformation of the lesion into carcinoma has been seen in many cases. Leukoplakia appears as a white plaque of the oral cavity suggestive of increased keratinisation of the mucosa due to its continuous irritation by noxious stimuli. The most commonly involved agent is tobacco and therefore reducing or quitting the habit of smoking tobacco may cause the lesion to disappear. There are majorly two forms of leukoplakia one being homogenous and the other non-homogenous form in which the white patches are interspersed with red areas. It is a non-scrapable lesion and clinically cannot be identified as any other lesion and carries an increased risk of malignant transformation having only a clinical significance and no particular histology. The most common sites where malignant transformation can occur include the floor of the mouth and the ventral surface of the tongue. Management of leukoplakia includes surgical and non-surgical modalities.[8] Cessation of tobacco use should be the first and foremost step towards treatment. Cryosurgery and laser treatment are being used currently for treating lesions. Topical

application of retinoids, beta-carotene, vitamin C supplements, bleomycin and 5-fluorouracil is another way of managing these lesions. Erythroplakia are red patches of the oral cavity which also have an increased risk for transformation into malignant lesions similar to leukoplakia. The main causative factors for erythroplakia are alcohol abuse and smoking. They have a velvety surface and a defined outline. The most common site of presence is the soft palate. Management of erythroplakia is similar to leukoplakia. A biopsy is essential to rule out other lesions and surgical excision of the lesion may be done.

Cancerous Oral Lesions

Cancerous oral lesions, also known as malignant lesions, are abnormal growths that have the potential to invade nearby tissues and spread to other parts of the body. Oral cancer is a significant public health concern, with risk factors including tobacco and alcohol use, human papillomavirus (HPV) infection, chronic irritation, and poor oral hygiene. The most common type of oral cancer is Squamous cell carcinoma,[9] Also known as epidermoid carcinoma, squamous cell carcinoma is a malignant lesion of the oral cavity which shows squamous differentiation and keratin formation. It can occur at various sites like the lip, tongue, floor of the mouth, buccal mucosa, gingiva, palate or even the maxillary sinus. They can metastasise more commonly to the superficial and deep cervical lymph nodes as well as to submaxillary lymph nodes. Usually, the affected area shows thickening, induration and ulceration. As the lesion enlarges it either forms a depression or forms an exophytic growth. Management of squamous cell carcinoma involves a combination of radiation therapy, chemotherapy and surgical approach.[10] Verrucous Carcinoma is a variant of squamous cell carcinoma. It presents as an exophytic growth on buccal mucosa. In areas of a mandibular ridge or gingiva, they involve the overlying soft tissue and become fixed to the periosteum. The surface of the lesion has a pebble-stone appearance and may sometimes be covered by a white film. Surgery and radiotherapy are used to treat these lesions. Early detection is crucial for successful treatment of oral cancer. Dentists and healthcare professionals play a vital role in identifying suspicious lesions during routine oral examinations. Biopsy and imaging tests, such as X-rays and CT scans, are used to confirm the diagnosis and determine the stage of the cancer. Treatment options for cancerous oral lesions depend on various factors, including the stage and location of the cancer. Common approaches include surgery, radiation therapy, chemotherapy, targeted drug therapy, and immunotherapy. The treatment plan is tailored to the individual's specific needs and may involve a multidisciplinary team of healthcare professionals.[11]

In Summary, Oral lesions refer to any abnormal or pathological changes that occur in the tissues of the mouth. These lesions can present in various forms, ranging from small sores and ulcers to growths or discolouration of the oral tissues. Oral lesions can be categorized into cancerous and non-cancerous types, with distinct characteristics, risk factors, and treatment options. Early detection, timely diagnosis, and appropriate management are essential.

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