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EARLY DIAGNOSIS OF LEUKOPLAKIA IN THE ORAL CAVITY

Babayeva N.M.

Bukhara State Medical Institute, Uzbekistan

ABSTRACT: Leukoplakia is one of potentially malignant disorders that can be found on oral mucosa. Speckled leukoplakia is a rare type of leukoplakia with a very high risk of premalignant growth.This case report was aimed to discuss about early detection of speckled leukoplakia as one of potentially malignant disorders.

Keywords: Potentially malignant disorder; speckled leukoplakia; early detection.

INTRODUCTION

Public awareness of lesions that can potentially be a malignancy in oral cavity has been increasing. One lesion that can be found in the oral cavity is leukoplakia. One of leukoplakia types on oral mucosa is speckled leukoplakia or erythroleukoplakia, a non-homogeneous type. Speckled leukoplakia (SL) according to WHO, is a leukoplakia with a mix of white and red plaque lesions.[2,4] Speckled leukoplakia is a form of leukoplakia that is rarely found with very aggressive high risk for transformation into malignancy, and also considered as precursor lesion for squamous cell carcinoma. Early detection and treatment of potentially malignant lesions in the oral cavity are important as a precautionary measure for the development of squamous cell carcinoma lesions.

Approximately, 4% of the worldwide population has suffered from leukoplakia, 6-23% of which are pre-malignant lesions. After verified through histopathological examination, all lesions of leukoplakia can be considered as a potentially malignant lesion[3].

The patient also has a history of allergy to the cold, high blood pressure, gout and high cholesterol, as well as hepatitis B. Therefore, he had regularly taken high blood pressure medicines, especially calcium antagonist class (amlodipine or nifedipine). In addition, he had also regularly consumed herbal drinks, such as turmeric and ginger solution. He had been smoking since the age of approximately 20 years, but he has stopped the habit since 10 years ago. There is a genetic predisposition in which his brother suffers from mammary carcinoma and bladder carcinoma. Based on submandibular gland examination, his left submandibular gland was palpable, soft, supple, and pain.

Based on the history and the extra-oral and intra-oral clinical examination, a temporary diagnosis of leukoplakia was set with a diagnosis of traumatic keratosis.

DISCUSSION

During the first examination, the patient was diagnosed with leukoplakia with traumatic keratosis diagnosis based on clinical description in which there are white nodular lesions and dental filling using amalgam materials with sharp edges. But after the dental filling was repaired, in the next two month control, the lesion was not improved, but getting worse by erosion around the nodular lesion. The patient was then referred to the oncology department for further examination and treatment. This is in accordance that if local factors have been eliminated and there is no improvement in the lesion, the patient should be referred for biopsy examination[2,7].

Leukoplakia is primarily a clinical term. Histopathological findings of the biopsy consists of surface epithelial hyperplasia and hyperkeratosis, atrophy with or without dysplasia cells.

Dysplasia cells can be mild, moderate, or severe[2,5,7] Epithelial dysplasia is commonly found in homogeneous leukoplakia, but less in nonhomogeneous leukoplakia[5]. The results of histopathological examination after the excisional biopsy in the patient showed hyperkeratosis epithelium, mild dysplasia, and intact basement membrane.

Symptomatic therapy given to the patient, was an antibacterial mouthwash made of sodium chlorite, aloe vera, zinc, and vitamin B complex supplements plus zinc. The antibacterial mouthwash was given to improve the oral hygiene of the patient. Sodium chlorite, aloe vera, and zinc contained are expected to help the healing process of the tissue. Sodium chlorite will produce oxygen, which is essential for cell metabolism, specifically the production of energy via adenosine triphosphate. In addition, level of superoxide production by polymorphonuclear leukocytes, necessary to kill bacteria is highly dependent on the level of oxygen[11]. Zinc may also play a role in the activation of metalloproteinase enzymes that play a role in the process of collagenase[12] The administration of multivitamin containing vitamin B complex, vitamin E and vitamin C, and zinc, moreover, aims to help the wound heal process. Vitamins E and C have antioxidant and anti-inflammatory effects on the wound healing process[10] Vitamin B complex plays a role as co-enzymes that catalyze biochemical reactions in body[13]

There are several factors triggering malignant leukoplakia[4,7,10]. First, age factor can make the elderly people increasingly at risk. Second, size factor of lesions can trigger the risk if it is larger than 2 cm. Third, habits factor can lead to the risk of malignancies, especially more common in smokers than non-smokers. Fourth, the location of the lesions on the tongue and floor of the mouth is more at risk than the buccal mucosa and commissure. Fifth, sex factor can also trigger the risk, which means women have higher risk of malignancies than men do. Sixth, clinical types can lead to the risk more than non-homogeneous type. Seventh, epithelial dysplasia can be considered to have a higher risk for experiencing malignancies. Eight, leukoplakia accompanied with candidiasis infection can trigger more the risk of malignancies. Ninth, the presence of ulcers, erosions, or nodules can also trigger the risk. This patient had six of the nine factors that influence the malignant tendencies of SL suffered. Therefore, early detection and excisional biopsy are essential to prevent potential malignancy of the lesion

In conclusion

Leukoplakia, especially SL, is a lesion that can lead to high malignancy, especially if there is epithelial cell dysplasia. Dentists play an important role in early detection of suspicious lesions leading to malignancy, which then could affect the prognosis for patients. In other words, early detection and treatment of lesions are important to prevent the possibility of lesion transformation into a malignant lesion.

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