LETTER TO EDITOR

Genetic Susceptibility: Etiologic Factor in Oral Submucous Fibrosis

1Denny E Ceena, 2Priya K Jeena, 3Ravikiran Ongole
1Reader, Department of Oral Medicine and Radiology, Manipal College of Dental Sciences, Mangalore, Karnataka, India
2Assistant Professor, Department of Oral Medicine and Radiology, Manipal College of Dental Sciences, Mangalore, Karnataka, India
3Professor, Department of Oral Medicine and Radiology, Manipal College of Dental Sciences, Mangalore, Karnataka, India

Correspondence: Denny E Ceena, Reader, Department of Oral Medicine and Radiology, Manipal College of Dental Sciences Light House Hill Road, Mangalore, Karnataka, India, e-mail: ceen226@yahoo.com

ABSTRACT

Oral submucous fibrosis is a chronic, progressive condition of the oral cavity. Although various causes have been attributed to the causation of OSMF, genetic susceptibility cannot be overlooked.

Keywords: OSMF, Etiology, Genetic susceptibility.

DEAR EDITOR

Oral submucous fibrosis (OSMF) is a chronic, progressive condition of the oral cavity. It affects an estimated 2.5 million people, mostly in the Indian subcontinent. Limitation of mouth opening resulting in difficulty in eating is the main presenting feature.

It is a condition with a malignant transformation rate of 19%, to date, no conclusive etiologic agent has been identified, although plenty of data have been generated on various aspects of the disease. These include genetic, carcinogenic, immunologic, viral, nutritional, and autoimmune possibilities, all of which also have been implicated in the development of oral cancer.

Although nutritional deficiencies and immunological processes may play a part in the pathogenesis, the available epidemiological evidence indicates that chewing betel quid (containing arecanut, tobacco, slaked lime or other species) is an important risk factor for OSMF.1

The amount of areca nut in betel quid and the frequency and duration of chewing betel quid are clearly related to the development of OSMF.2

However, only a small fraction of those using betel quid develop the disease, this shows a clear genetic susceptibility. In genetically predisposed people, betel nut and pan chewing render the oral mucosa susceptible to chronic inflammatory changes.

OSMF has also been reported in families (both children and adults) whose members have a habit of chewing betel quid or arecanut.3

The occurrence of oral submucous fibrosis even in the absence of intraoral influences, such as betel chewing, smoking, or a high intake of spicy foods suggest that there are other factors including genetic influence and an increased frequency of HLA10, DR3 and DR7.3,4

We conducted a study recently to assess the occurrence of OSMF in individuals without chewing habits and those who have developed OSMF within 1 year of chewing arecanut and gutkha products.

Out of the 253 OSMF patients evaluated over a period of 2 years, two patients of 15 years age had no previous history of chewing. Eight patients (3%) in the age group of 27 to 50 years had a history of chewing gutkha for less than 6 months and 21 patients (8.3%) in the age group of 19 to 45 years had been chewing gutkha for 1 year.

Thus, apart from the various etiological factors proposed for the causation of OSMF, the role of genetic susceptibility cannot be overlooked.

REFERENCES