

# Comparative study of *Candida* in oral submucous fibrosis and healthy individuals

Estudo comparativo de *Candida* em fibrose submucosa oral e indivíduos saudáveis

## Abstract

**Purpose:** Oral submucous fibrosis (OSMF) is a high-risk precancerous condition that predominantly affects Indian youngsters due to the habit of gutkha chewing. *Candida* may play a role in the etiopathogenesis of premalignant and malignant lesions. The aim of this study is to compare the incidence, intensity, and species of *Candida* found in OSMF patients and healthy individuals.

**Methods:** This study included 20 OSMF patients and 20 healthy controls. A detailed history of each patient was recorded along with a clinical examination. Samples were collected with the oral rinse technique and cultured on Sabouraud's agar medium. The isolated yeast species were counted and identified based on Gram staining, a germ tube test, chlamyospore formation and a sugar assimilation test.

**Results:** In total, 40% of OSMF patients and 15% of healthy controls yielded *Candida* organisms on culture. *C. albicans* was the predominant species isolated, but *C. krusei* and *C. tropicalis* were also identified. Gender, gutkha habit and clinical staging had no influence on the candidal carriage in OSMF patients.

**Conclusion:** The incidence and intensity of *Candida* (primarily *C. albicans*) was greater in OSMF patients than in healthy controls, but these findings were within the normal limit (3-47%). Therefore, *Candida* may not be an etiologic factor in malignant transformation. However, controversy still exists over whether the chewing of betel quid in cases of OSMF has an inhibitory effect or promotes the adherence and invasion of *Candida*.

**Key words:** *Candida*; gutkha chewing; oral carriage; oral submucous fibrosis

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