

**Evaluation of Myofibroblast in Oral Submucous Fibrosis and correlation
with disease severity – A Case Control Study**

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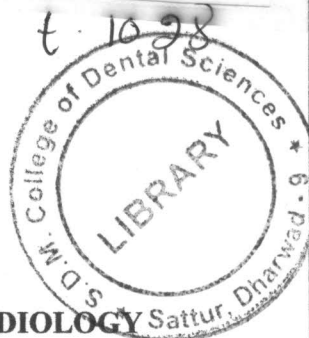
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ABSTRACT

Oral submucous fibrosis (OSMF) is a chronic debilitating disease and a premalignant condition of the oral cavity characterized by generalized submucosal fibrosis. Myofibroblasts are contractile cells expressing α -smooth muscle actin (α -SMA) and are considered primary producers of extracellular matrix after injury. Their accumulation has been established as a marker of progressive fibrosis in organs like lungs, liver, kidney and skin. This study aims to evaluate the presence of myofibroblasts in various histological stages of OSMF.

40 cases of OSMF which were further categorized histologically into very early/early cases (20) and moderate/advanced cases (20) were subjected to immunohistochemistry using α -SMA antibody for detection of myofibroblasts. 20 normal oral mucosa specimens were stained as controls. Tissue specimens were obtained by incisional biopsies from the OSMF patients in the study group and from adjacent gingival tissue in patients undergoing 3rd molar extractions in the control group with prior consent. The biopsy specimen were preserved in formalin and were subjected to immunohistochemistry.

Based on statistical analysis using Mann Whitney and Krushal Wallis test there was a statistically significant increase in number of α -SMA antibody stained myofibroblast in cases of OSMF. Also more increase in number of myofibroblast was found in advanced/moderate cases as compare to very early/early cases.

KEYWORDS: Areca nut; fibrosis; histological stages; myofibroblasts; oral submucous fibrosis; pathogenesis; wound healing