"MATRIX METALLOPROTEINASE – 1 EXPRESSION IN ORAL SUBMUCOUS FIBROSIS, IN RELATION TO CLINICAL GRADING"

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ABSTRACT

Back ground: OSF is characterized by blanching and stiffening of any part of the oral mucosa. The basic change is fibroelastic transformation of the connective tissue in the lamina propria with epithelial atrophy. Arecoline stimulates fibroblasts to increase in the collagen production by 150%.

Aims and Objectives: The aim of the study is to assess the OSF by clinical and functional staging. The study was carried out to evaluate the role of MMP-1(collagenase) in OSF and also correlating with the clinical grading of OSF.

Setting and design: A total of 90 patients were included in this study, based on the mouth opening divided into three groups Group I – 0 – 20mm, Group II – 20 – 40mm and Group III is above 40mm (control group).

Methodology and Method: In all the three groups punch biopsy was made and the tissue fragments was lyophilized, weighed, and extracted at 4°C in 0.5 M acetic acid-HCl at pH 2.0 for 24 hours. A commercially available MMP-1(MMP-1 ELISA from Biogenes) kit was used for analysis

Results: ANNOVA test of association shows a statistically significant between the three groups, with Group III shows the higher mean value of MMP-1 when compared to Group I and Group II

Conclusion: In the present study, it can be stated that in severe OSF cases there is an increased levels of collagen as evidenced with the low levels of MMP-1 activity. The level of MMP-1 expression intensity is decreased with the severity of OSF i.e. stage III to stage II and further decrease in Stage I and results were statistically significant $p < 0.00$.

KEY WORDS: Oral submucous fibrosis, Matrix metalloproteinase – 1, Mouth opening, Collagenase – I,