

The immunohistochemical study of angiogenesis in normal oral mucosa and oral lichen planus by CD34 and DC105 markers.

Eshghyar N^{#1}, Asgari M², Rahrotaban S², Monshizadeh R³

¹Prof, Oral Pathology Dept, School of Dentistry Tehran University of Medical Sciences, Iran

² Assistant Prof, Oral Pathology Dept, School of Dentistry Tehran University of Medical Sciences, Iran.

³Post Graduate Student, Oral Pathology Dept, School of Dentistry Tehran University of Medical Sciences, Iran.

Abstract

Background and Aim: Oral lichen planus is a chronic inflammatory disease that its etiology has remained unknown yet, but cell mediated immunity may play a role on its pathogenesis. Angiogenesis is a major component of neoplastic and chronic inflammatory disorders but its occurrence in mucocutaneous inflammatory diseases such as OLP has not yet been proved. The aim of this study is the determination of the expression of angiogenesis markers of CD34 and CD105 in OLP and compare the rate of angiogenesis with normal mucosa.

Materials and Methods: In this case-control study, thirty formalin fixed paraffin embedded OLP samples including 15 samples of reticular and 15 samples of erosive OLP were used. Immunohistochemical staining for CD34 and CD105 was done on 4 micrometer thickness sections to illustrate submucosal microvessels. Fifteen samples of normal mucosa used as positive control. Microvessel counting was done on five regions at epithelium- connective tissue junction. The results were analyzed by one sample kolmogrov-smirnov test and post hoc test (Tamhan type) and one way Anova test with SPSS software 11.5.

Result: The differences of CD34 & CD105 expression were significant between two groups. ($p < 0.001$) The Micro vascular density (MVD) by CD34 was 18.16 and by CD105 was 9.96. Amount of CD34 and CD105 expression were increased with high correlation coefficient ($P < 0.001$), ($R = 0.991$) for both markers from normal mucosa to reticular and erosive OLP.

Conclusion: Higher expressions of CD 34 & CD 105 in OLPs compare to normal mucosa may have relation to angiogenesis in OLP lesions. This study shows potential angiogenic function in OLPs than normal mucosa.

Keywords: *Endoglin(CD105), CD34, Lichen planus, Immunohistochemistry.*