

# Expression of MMP 9 in Chronic Periodontitis with and without type II Diabetes Mellitus – An Immunohistochemical study

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## Abstract

**Background:** Periodontitis is a chronic inflammatory disease of microbial origin, causing progressive destruction of supporting structures of the teeth. Diabetes Mellitus and Periodontal Disease have a bidirectional link where the coexistence of both conditions worsen the other. **Aim:** of the study is to analyse immunohistochemically the expression of MMP 9 in Chronic Periodontitis patients with and without Diabetes Mellitus. **Methodology:** The study includes 4 groups. Group I: Controls (healthy periodontium) Group II: Chronic periodontitis without Diabetes Mellitus, Group III: Diabetes mellitus without Chronic Periodontitis, Group IV: Diabetes mellitus with Chronic Periodontitis. Gingival tissue samples were taken at the time of periodontal surgery and subjected to Immunohistochemistry, using anti-MMP-9 (Polyclonal rabbit anti-human MMP-9, Bio SB. **Results:** The immune positive cells were scored as + (discrete number of immune positive cells), ++ (moderate number of positive cells), score +++ (large number of immune positive cells), while 0 represents negative expression. It is observed that the mean value score was ++ in Group II, and +++ in Group IV. There was a statistically significant increase in MMP 9 immunostained cells in Group IV. **Conclusion:** The increased MMP 9 expression in Group IV indicates an exaggerated inflammation causing unwanted periodontal tissue destruction. This shows the influence of diabetes on periodontal health

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## Biography

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submission. She has more than 15 years of teaching expertise. She has an ardent interest in pursuing research. Her current research is involving Diabetes Mellitus and Periodontal health. She is the recipient of Best Faculty Award. Her credentials include more than 20 publications in reputed journals