

## $\beta$ glucuronidase as an oral biomarker in the progression of periodontal disease and treatment outcomes

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Periodontitis is a disease characterized by loss of connective tissue attachment and bone around the teeth in conjunction with the formation of periodontal pockets. Bacterial virulence factors either result directly in degradation of host tissues or cause the release of biologic mediators from host tissue cells that lead to host tissue destruction. Mediators produced as a part of the host response that contribute to tissue destruction include proteinases, cytokines and prostaglandins and also a variety of enzymes produced by periodontal microorganism cause tissue destruction. Traditional clinical measurements (probing pocket depth, bleeding on probing, clinical attachment loss, plaque index, radiographs) used for periodontal diagnosis are often of limited usefulness in that they are indicators of previous periodontal disease rather than present disease activity. There is a need for development of new diagnostic tests that can detect the presence of active disease, predict future disease progression and evaluate the response to periodontal therapy, thereby improving the clinical management of periodontal disease patients. The present study evaluated the usefulness of analysing gingival crevicular fluid (GCF)  $\beta$ -Glucuronidase ( $\beta$ G) levels in chronic periodontitis patients receiving systemic doxycycline and mechanical periodontal therapy over a five month period. Significant improvement was observed in all clinical parameters and decrease in  $\beta$ G levels in group receiving combined doxycycline and mechanical therapy over 5-month period ( $P < 0.01$ ). These results provide usefulness of  $\beta$ G levels in GCF as a measure of ongoing destruction and also an indicator for measuring the effectiveness of different treatment modalities.

### Biography

Afaf Zia completed her B.D.S (Bachelor of Dental Surgery) from Dr Ziauddin Ahmad Dental College & Hospital, Aligarh Muslim University, Aligarh, India in 2007. She is currently undertaking her M.D.S (Master of Dental Surgery) in Periodontology at Dr Ziauddin Ahmad Dental College & Hospital, Aligarh Muslim University, Aligarh, India. She has a great interest in Clinical Research. She has published papers in several reputed national and international journals.

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