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## Influence of non-surgical periodontal therapy on glutathione peroxidase levels and insulin resistance in chronic periodontitis subjects with prediabetes

**Rupali Agnihotri**

Manipal University, Karnataka, India

Prediabetes (PRD) has been closely associated with chronic periodontitis (CP). Lately, studies have proposed the role of Glutathione peroxidase (GPx), a ubiquitous antioxidant, in potentiating insulin resistance (IR), a significant factor in PRD. As overexpression of GPx is associated with CP as well as IR, the current study was undertaken to evaluate the influence of non-surgical periodontal therapy (NSPT) on GPx levels and IR in CP subjects with PRD. 46 subjects were divided into two major groups: healthy controls (n=10) and CP (n=36), according to probing depth (PD) and clinical attachment loss (CAL). The CP patients were sub divided into CP only (n=18) and CP with PRD (n=18) based on baseline FBS levels. Serum, crevicular GPx and Malondialdehyde (MDA) were measured in all the subjects using spectrophotometry. The participants underwent NSPT at baseline and three months. At six months, all the parameters were re-recorded. Intragroup and intergroup comparisons of baseline and six months data were done using paired t test and ANOVA respectively. At 6 months after NSPT, there was a significant reduction ( $p<0.05$ ), in PD and CAL in all the three groups which was associated with reduced GPx and MDA levels. Besides, significant reduction in IR was seen in CP and CP with PRD groups ( $p<0.05$ ). NSPT may be a vital tool in reducing IR in CP subjects with PRD. This was evident as there was a progressive reduction in IR with GPx levels along with improvement of other parameters, specifically in PRD group.

### Biography

Rupali Agnihotri completed her MDS in the specialty of Periodontology from Manipal University, Manipal in the year 2009. She is currently working as an Associate Professor in the Department of Periodontology, Manipal College of Dental Sciences, Manipal University, Manipal, Karnataka, India. She has 12 papers to her credit in reputed journals.

get2rupaliagnihotri@gmail.com

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