

Lactobacillus spp and Anti-inflammatory Observation in Chronic Periodontitis in Diabetic Patients

Jihan A. Ibrahim, Msc* Zubaida NM.Albarzanji, PhD* Entedhar R. Sarhat, PhD**

ABSTRACT

Background: The oral microbiota of people with diabetes may be disturbed by oxygen tension, pH, redox potential, and latent nutrient supply in the microbial environment may influence changes in the microbiome.

Aim: This study was conducted to evaluate the prevalence and types of lactobacilli spp in chronic diabetic periodontitis, along with their effect on Biochemical and anti-inflammatory markers in saliva.

Methods: This case-control study encompassed 100 participants recruited from patients who visited Kirkuk College of Dentistry outpatient dental clinics. The participants were categorized into two groups: 50 patients have chronic periodontitis with confirmed diabetes mellitus and a control group with diabetes but without periodontitis, as judged by their; Williams Index, Plaque Index and Gingival Index. For both groups, we measured salivary Fetuin-A, Ceruloplasmin, and Preptin and we cultured saliva samples for six Lactobacillus species.

Result: The patient group showed improved plaque control ($P < 0.001$) according to the Plaque Index. Moreover, the Gingival Index indicated heightened inflammation in the patient group ($P < 0.001$), as did the Pocket Probing Depth ($P < 0.001$), signifying deeper periodontal pockets. Furthermore, the patient group has shown significant attachment loss in the patient group ($P < 0.001$).

Conclusion: The study highlighted the nexus between diabetes Mellitus Lactobacillus species prevalence improving our understanding of the disease pathology and subsequent contribution in oral diseases.

Keywords: Plaque index, Williams index, Gingival index, Lactobacillus, Periodontitis.

Bahrain Med Bull 2024; 46 (2): 2059 - 2063

* College of Dentistry, University of Kirkuk, Kirkuk, Iraq

** College of Dentistry
Tikrit University, Tikrit, Iraq.
Email: entedharr@tu.edu.iq