

Glycated Hemoglobin, Gastric Juice Nitric Oxide and Oxidative Stress in Diabetic Patients Infected by *Helicobacter Pylori*

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Abstract

Background and Objective: Recently, diabetes mellitus has been known as one of the main cause of upper gastrointestinal symptoms. Since a high prevalence of *H. Pylori* in diabetic patients has been reported, we aimed to evaluate the level of gastric juice Nitric Oxide (NO^o), Oxidative Stress and Glycated Hemoglobin.

Material and Methods: In case group, the participants were 60 diabetic patients infected with *H. Pylori*, and in control groups 60 diabetic patients without *H. Pylori* and 60 healthy individuals. The level of NO^o in gastric juice was measured calorimetrically and the activity of superoxide dismutase (SOD) and glutathione peroxidase (GPX) in gastric biopsy was determined using standard methods. The percentage of Glycated Hemoglobin (*HbA1C*) was measured by ion exchange chromatography.

Results: In case group compared to controls, significantly increased level of blood *HbA1C*, nitric oxide in gastric juice, activity of SOD and GPX in the gastric mucosa were observed ($p < 0.0001$).

Conclusion: A significant increase of glycated hemoglobin in diabetic patients with *H. Pylori* and high activity of antioxidant enzymes in the case group may indicate a high production of reactive oxygen species and the presence of oxidative stress in these patients.

Key Words: Diabetes Mellitus, *H. Pylori* Infection, Glycated Hb, Nitric Oxide, Oxidative Stress