COMPARISON OF LEVELS OF NITRIC OXIDE, SUPEROXIDE DISMUTASE AND GLUTATHIONE PEROXIDASE OF GASTRIC JUICE IN INFECTED AND NON-INFECTED PATIENTS WITH HELICOBACTER PYLORI

M. Ansari, M. Rahbani-Nobar, H. Dolatkhah, E. Fattahi, A. M. Aghazade S. Mojtabaii-Motlag

Abstract:

Helicobacter Pylori infection leads to different clinical and pathological outcomes in humans, including chronic gastritis and gastric neoplasia. It has been demonstrated that oxidative stress associated with inflammation plays an important role in gastric carcinogenesis. To evaluate the oxidative stress in H. Pylori infection we studied the gastric juice levels of nitric oxide and the activities of superoxide dismutase and glutathione peroxidase. A total of 43 patients suffering from H. Pylori infection were selected and 43 non-infected individuals were chosen as control group. Compared to control group, significant reduction in the mean levels of nitric oxide in the gastric juice of the patients was noticed (P = 0.0001). In the patients activities of superoxide dismutase and glutathione peroxidase in gastric juice were markedly higher than those of control group (P = 0.0001 and P = 0.0001, respectively). A reverse and meaningful relationship was observed between the levels of nitric oxide and the activities of superoxide dismutase in the gastric juice of patients (r = -0.35, P = 0.023). The results of this study confirm that H. Pylori has developed various mechanisms to escape the effect of immune system. H. Pylori have also developed strategies for defense against oxidative stress.

Keywords:

glutathione peroxidase

TUMS ID: 2989

Full Text HTML   Full Text PDF 64 KB