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**Title:** Association of inflammation causes by Helicobacter pylori in pathogenesis of cardiac syndrome X

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**Abstract:** Background: Helicobacter pylori (HP) is a gram-negative bacterium which infects the human stomach. It was previously demonstrated that HP induced chronic inflammation. The evidence for this is included that inflammatory markers such as interleukin-6 (IL-6) and tumor necrosis factor-alpha (TNF-α) may be increased. More recently, the data has been suggested that inflammation has been associated with cardiac syndrome X (CSX). CSX is defined by an angina pectoris with normal coronary angiogram. Thus, we measured plasma IL-6 and TNF-α levels to assessment the presence of systemic inflammation in patients with CSX and its possible relation to HP infection.

**Methods and materials:** Sixty patients with CSX and sixty age and gender matched healthy controls were enrolled in this study. Plasma samples were tested for the presence of antibody (IgG) to HP using enzyme linked immunosorbent assay (ELISA). The plasma levels of IL-6 and TNF-α were measured by ELISA too. At last, statistical analysis was carried out on results

**Results:** 95% of patients were HP infected, while only 40% of controls were infected (p<0.05). CSX patients were detected to have significantly higher plasma IL-6 and TNF-α levels in comparison with controls [IL-6: 33.64±3.49 vs. 3.21±0.43; TNF-α: 24.17±2.26 vs. 3.07±0.35; pg/ml; (p<0.05)]. Also in both groups, the plasma levels of these inflammatory factors in HP+ subjects were significantly higher than those in HP- subjects.

**Conclusion:** Our data suggest that HP infection probably is associated with susceptibility to CSX by causing inflammation. The evidence for this hypothesis include that the levels of IL-6 and TNF-α are increased in HP+ subjects and CSX patients.

**Cardiac syndrome X, Helicobacter pylori, IL-6, TNF-α**

**Presentation:** Poster