ORIGINAL ARTICLE

Taylor&Francis
healthsciences

'Serological Biopsy' in First-Degree Relatives of Patients with Gastric Cancer Affected by *Helicobacter pylori* Infection

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Di Mario F, Moussa AM, Caruana P, Merli R, Cavallaro LG, Cavestro GM, Dal Bò N, Iori V, Pilotto A, Leandro G, Franzè A, Rugge M. 'Serological biopsy' in first-degree relatives of patients with gastric cancer affected by *Helicobacter pylori* infection. Scand J Gastroenterol 2003;28:1223–1227.

Background: Relatives of patients with gastric cancer are at increased risk of developing this disease, especially if they are infected by *Helicobacter pylori*. Moreover, *H. pylori*-related atrophic gastritis and hypochlorhydria are well-documented risk factors for noncardia gastric cancer. Serum pepsinogen I (sPGI) and II (sPGII) levels are low in this condition. The aim of our study was to assess by means of a 'Gastropanel' blood test, including sPGI, sPGII, gastrin-17 (G-17) and antibodies anti-*H. pylori* (IgG-Hp), both functional and morphological features of gastric mucosa in *Hp + ve* subjects with a family history of gastric cancer. **Materials and Methods:** Twenty-five *Hp + ve* subjects consecutively referred to our department for gastrointestinal complaints, selected as first-degree relatives of patients suffering from gastric cancer, were enrolled in the study and then matched for sex and age with 25 dyspeptic and *Hp + ve* subjects with no family history of gastric neoplasia. Blood samples were taken for determination of gastropanel in all patients; in addition, antibodies against CagA were analysed. **Results:** No statistically significant differences were detected zbetween the two groups as regards alcohol consumption, coffee intake and smoking habits. Mean sPGI levels in Group A (83.4 ± 58.4 μg/L) were significantly lower than those in Group B (sPGI 159.5 ± 80.6 μg/L; $P < 0.0001$) as well as sPGII (12.5 μg/L ± 6.24 versus 20.6 ± 58 μg/L; $P < 0.006$). No statistical difference was found between the two groups in relation to G-17 levels, IgG-Hp titres and antibodies against CagA. **Conclusion:** First-degree relatives of patients with noncardia gastric cancer affected by *H. pylori* infection present lower sPGI and sPGII levels, possibly due to the increased frequency of atrophic lesions in these patients.

Key words: Family relatives; gastric cancer; *H. pylori*; serum pepsinogens

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