Accuracy of "serological gastric biopsy" in a cohort of dyspeptic patients

L. G. Cavallaro[1], R. Merli[1], S. Liatopoulou[1], I. Franzè[1], M. Maino[1], V. Iori[1], G. Cavestro[1], A. Gnocchi[2], P. Caruana[3], A. Franzè[2], F. Di Mario[1];
[1]University of Parma/Department of Clinical Sciences, Section of Gastroenterology, Parma, Italy, [2]Gastroenterology and Endoscopic Unit, Az.Ospedaliera, Parma, Italy, [3]University of Parma/Pathologic Institute, Parma, Italy.

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Background: Serum pepsinogens (sPGI and sPGII), gastrin-17 (G-17) and antibodies anti-*H. pylori* (anti-Hp) have been proposed as a "serological gastric biopsy". These markers could be important in a pre-endoscopic management of dyspeptic patients.
Aim: To assess the accuracy of sPGI, sPGII, G-17 and anti-Hp to discriminate normality, inflammation and atrophy of gastric mucosa in dyspeptic patients.
Methods: 176 consecutive patients (49 ys ±17 SD, 107 F, 69 M) with dyspeptic symptoms and not in therapy with antisecretory gastric drugs were studied. All the patients underwent gastroscopy with biopsies and blood test for sPGI, sPGII, G-17 and anti-Hp. Patients were classified in N (with normal gastric mucosa), NACG (with non atrophic chronic gastritis) and ACG (with atrophic chronic gastritis moderate/severe) according to histological findings and separately by means of serological tests, in a masked way.
Results: According to the histological findings, patients resulted: 76 N, 79 NACG and 21 ACG (7 predominantly in antrum, 8 in corpus and 6 diffused). By means of serological analysis, the same patients were classified in: 77 N, 82 NACG and 17 ACG (4 predominant in antrum, 10 in corpus and 3 diffused). Accuracy, sensitivity, specificity, positive and negative predictive values of serological diagnosis in comparison to histology were respectively: 81, 79, 83, 78, 81% to detect normality; 80, 80, 80, 77, 83% to detect inflammation; 96, 78, 98, 82, 98% to detect atrophy.
Conclusion: serum pepsinogens, gastrin-17 and anti-Hp are useful markers to screen normal gastric mucosa from non atrophic and atrophic chronic gastritis.