

Correlation of serum pepsinogens and gastrin-17 with atrophic gastritis in gastroesophageal reflux patients: a matched-pairs study.

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Source

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Abstract

BACKGROUND AND AIM:

An algorithm (GastroPanel) for the non-invasive diagnosis of atrophic gastritis has been previously proposed, based on serum pepsinogen-I, gastrin-17, and *Helicobacter pylori* (*H. pylori*) antibodies. The aim of the present study was to evaluate whether serum markers correlate with and predict gastric atrophy in gastroesophageal reflux disease (GERD) patients.

METHODS:

The baseline data of the prospective ProGERD study, a study on the long-term course of GERD (n=6215 patients), served to select patients with atrophic gastritis diagnosed in biopsies from gastric antrum and corpus, and control cases without atrophy. A total of 208 pairs were matched for age, sex, GERD status (erosive vs non-erosive), presence of Barrett's esophagus, and histological *H. pylori* status were retrieved. Serum pepsinogen-I, gastrin-17, and *H. pylori* antibodies were determined using specific enzyme immunoassays.

RESULTS:

A significant negative correlation was found between the degree of corpus atrophy and the level of serum pepsinogen-I. A previously-reported negative correlation between the degree of antral atrophy and serum gastrin-17 could not be confirmed. The low sensitivity (0.32) and specificity (0.70) of the GastroPanel algorithm were mainly due to over diagnosis and under diagnosis of advanced atrophy in the antrum.

CONCLUSION:

The diagnostic validity of the GastroPanel algorithm to diagnose gastric atrophy non-invasively is not sufficient for general use in GERD patients.