

## **Application of ELISA assays of pepsinogen I, gastrin-17 and *H. pylori* antibodies for non-endoscopic diagnosis of atrophic gastritis**

Sipponen P, Forsblom E, Suovaniemi O, Härkönen M

A new blood test panel has been developed and is targeted for non-endoscopic diagnosis of atrophic gastritis, including atrophic gastritis of the antrum. It composes of assays of *H. pylori* antibodies (IgG), serum pepsinogen I (S-PGI) and postprandial serum gastrin-17 (S-G-17prand). The accuracy of the test panel has been investigated in a study population, which consists of 100 selected dyspeptic patients. The S-G-17prand values are measured 20 minutes after a protein rich drink. The S-PGI decreases with an increase of the grade of the corpus atrophy and, in an evaluation of the test panel, a low S-PGI (< 25 µg/l) was found in 32 (84 %) of 38 patients with advanced (moderate or severe) corpus atrophy and in 3 (5 %) of 62 patients without atrophy. The S-G-17prand decreases with increasing grade of antrum atrophy, and low values (< 5 pmol/l) were found in 17 (89 %) of 19 patients with advanced atrophy that was limited to antrum. In the overall diagnosis of atrophic gastritis (either in antrum or corpus, or in both), the sensitivity and specificity of the test panel (*H. pylori*, PGI, G-17) is 93 % (86 % - 100 %) and 91 % (82 % - 100 %), respectively. It is concluded that the test panel is a reliable tool for diagnosis of atrophic gastritis from a blood sample, also including the diagnosis of atrophic gastritis of the antrum. The blood test panel provides a comprehensive non-endoscopic possibility for delineation of patients with advanced atrophic gastritis who are at risk for gastric cancer.

**Key words:** serum pepsinogen I, serum gastrin-17, *Helicobacter pylori*, antibodies, atrophic gastritis.

*Russian Journal of Gastroenterology, Haepatology, Coloproctology* 2002; Vol.XII, No.3: 46-51.