Serum pepsinogen II: a neglected but useful biomarker to differentiate between diseased and normal stomachs.

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Source

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Abstract

BACKGROUND AND AIM:

Serum pepsinogen II (sPGII) is underutilized and considered an inconspicuous biomarker in clinical practice. We refocused on this neglected but novel biomarker and conducted the present study, aiming to elucidate the normal level of sPGII in healthy Chinese patients and to investigate the clinical utility of sPGII for gastric disease screening.

METHODS:

In 2008-2009, a total of 2022 participants from northern China were selected and enrolled in the study. sPGII and Helicobacter pylori (H. pylori)-immunoglobulin G were measured with ELISA.

RESULTS:

sPGII showed a normal value of 6.6 microg/L in a total of 466 patients with endoscopically- and histologically-normal stomachs. A small sex difference was observed: the average value of sPGII was 7 microg/L and 6 microg/L in males and females, respectively (P < 0.001). In the differentiation between healthy and diseased (endoscopically-diseased stomach or gastritis/atrophic gastritis in endoscopic biopsies) stomach mucosae, the best sPGII cut-off value was 8.25 microg/L (sensitivity 70.6%, specificity 70.8%). In screening the H. pylori seropositivity, the optimum cut-off sPGII value was 10.25 microg/L (sensitivity 71.6%, specificity 70.1%).

CONCLUSIONS:

We demonstrated that the mean values of sPGII in a healthy Chinese population are 7 microg/L and 6 microg/L for males and females, respectively. sPGII significantly increases in diseased and H. pylori-infected stomach, and the best sPGII cut-off value is 8.25 microg/L in the differentiation between patients with healthy and diseased stomach mucosae. Furthermore, Chinese patients with sPGII greater than 10.25 microg/L are at greater risk of various H. pylori-related gastropathies, and are therefore prior candidates for gastro-protection therapy.

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