Quantification of serum levels of pepsinogens and gastrin to assess eradication of Helicobacter pylori.


Abstract

BACKGROUND & AIMS:

We investigated whether serum levels of pepsinogen (sPGI) and sPGII, the ratio of sPGI to sPGII, or serum levels of gastrin-17 (sG17), can be used to assess eradication of Helicobacter Pylori 8 weeks after treatment.

METHODS:

We performed a prospective study of 228 consecutive patients with H pylori infections. At the start of the trial (baseline), patients were assessed using the (13)C-urea breath test ((13)C-UBT) and endoscopy, and serum levels of pepsinogens and gastrin levels were measured. Patients were offered a 7-day triple therapy and asked to return 8 weeks after treatment for another (13)C-UBT and measurements of serum levels of sG17, sPGI, and sPGII (175 patients completed the study).

RESULTS:

The eradication rate of H pylori was 67%. Percentage variation in levels of sPGI and sPGII, the ratio of sPGI to sPGII, and in levels of sG17 resulted in area under the curve values of 0.858, 0.973, 0.940, and 0.810, respectively, for H pylori eradication. A decrease of 22.7% or greater in the level of sPGII detected H pylori eradication with 100% sensitivity and 96.6% specificity. Spectrum analysis did not identify differences in accuracy.

CONCLUSIONS:

Percentage variation of sPGII levels 8 weeks after therapy for H pylori infection correlates with eradication. Additional studies are needed to confirm these results.