Abstract / Povzetek predavanja

The impact of Helicobacter pylori eradication on long-term ghrelin levels and body weight

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INTRODUCTION

The association between chronic *Helicobacter pylori* infection and hormone levels affecting food intake and obesity remains controversial. Thus, our aim was to investigate the long-term effect of *H. pylori* eradication on changes in ghrelin and leptin levels.

METHODS

A total of 72 patients meeting the inclusion and exclusion criteria were enrolled (July 2020 to November 2022). Participants were randomly assigned to two treatment groups (group 1: 14-day regimen with esomeprazole, amoxicillin, and clarithromycin; group 2: 14-day regimen with esomeprazole, amoxicillin, metronidazole and colloidal bismuth subcitrate). We evaluated changes in insulin resistance (HOMA-IR score), body mass index (BMI) and serum levels of ghrelin and leptin (ELISA test) at baseline, two months, and one year following successful H. pylori eradication.

RESULTS

Of the 72 patients included, 13.9% (10/72) did not complete the study protocol. Both treatment groups were similar at enrollment and showed no statistically significant differences ($p = 0.332$ for OLGIM stages; $p = 0.583$ and $p= 0.696$ for antrum and corpus atrophy respectively, $p = 0.177$ and $p = 0.296$ for antrum and corpus intestinal metaplasia respectively). No statistically significant changes were present in BMI ($p = 0.910$) and insulin resistance ($p = 0.342$) after *H. pylori* eradication. A statistically significant decrease in ghrelin serum levels was observed in both treatment groups ($p < 0.001$, Figure 1), but not in leptin serum levels ($p = 0.309$).

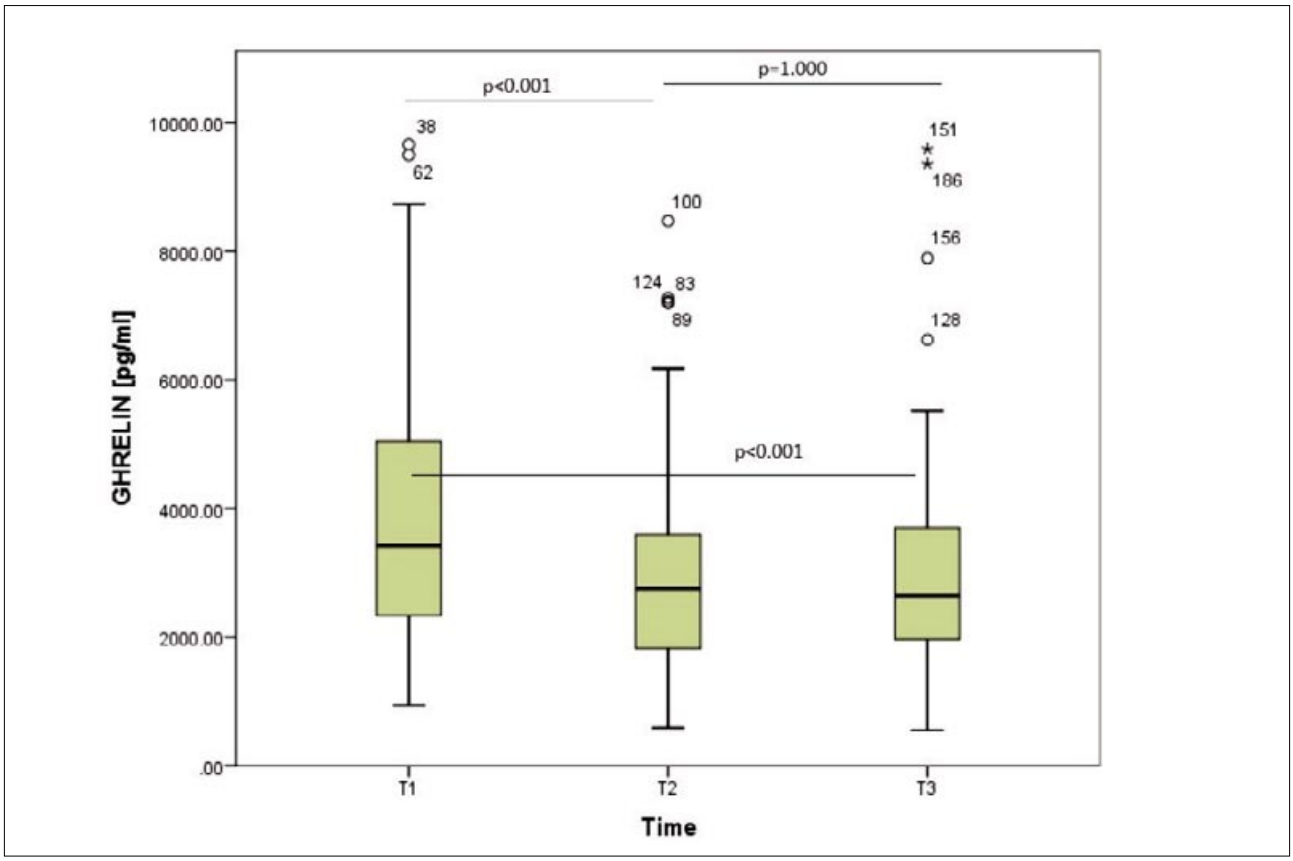

Figure 1. Serum ghrelin levels at baseline, two months after eradication therapy and one year after successful eradication of Helicobacter pylori.
T1 – at baseline, T2 – 2 months post-eradication, T3 – 1-year post-eradication

CONCLUSIONS

Successful eradication of chronic H. pylori gastritis decreased serum ghrelin levels regardless of the presence of gastric mucosal atrophy. Furthermore, no changes in BMI or waist circumference were detected after one year of follow-up, proving that *H. pylori* eradication is not related to weight gain through hormonal changes as previously hypothesized. These results reduce the fear that massive *H. pylori* eradication from the population could be associated with obesity.

References

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