

Reviewer #1:

- In another recently published systematic review and metaanalysis regarding the Hp infection world-wide, there were some differences between the data reported in reference 4 of the paper and the following metaanalysis: Zamani M, Ebrahimitabar F, Zamani V, Miller WH, Alizadeh-Navaei R, Shokri-Shirvani J, Derakhshan MH. Systematic review with meta-analysis: the worldwide prevalence of Helicobacter pylori infection. *Aliment Pharmacol Ther.* 2018;47:868-876. doi: 10.1111/apt.14561.
- The reference list should be expanded.

Thank you for the comment. We expanded our article with this new (2018) metaanalysis' results, reference list.

- The authors should use more recent data in the discussion section when trying to discuss their findings in comparison with data of the international literature.

We expanded discussion with more recent data.

Reviewer #2:

This is a good article dedicated to the epidemiological study of the prevalence of Helicobacter pylori in urban and rural regions of Hungary. The study included a large number of patients, allowing authors to conclude about the different H. pylori

infection prevalence of urban and rural population in two (Békés County and Csongrád County) regions of Hungary. The authors have convincingly shown that agricultural/industrial workers were more likely to be positive for infection than office workers. The authors analyzed the risk factors for H. pylori positivity appeared to be valid for the studied population. When analyzing the prevalence of H. pylori in the world it would be good to present data on Russia (Reshetnyak VI, Reshetnyak TM. Significance of dormant forms of Helicobacter pylori in ulcerogenesis. World J Gastroenterol 2017; 23(27): 4867-4878 Available from: URL: <http://www.wjgnet.com/1007-9327/full/v23/i27/4867.htm> DOI: <http://dx.doi.org/10.3748/wjg.v23.i27.4867>)

Thank you for the comment. We added that to the introduction.

Reviewer #3:

The topic of the present manuscript is interesting because Helicobacter pylori is one of most common chronic bacterial infections in humans and because there are relatively few reports from Hungary. The present study encompassed numerous (>1000) subjects. However, there are some additions or corrections needed.

- The authors have put neither line numbers nor page numbers in their manuscript and this hampers the review to some extent.
- Abstract: The abstract is rather long; I suggest to shorten it by about 1/3.

Thank you for the comment. We put page numbers in the manuscript. We shortened the abstract

- Introduction: “Conversely, little is known regarding the prevalence of HP in Central Europe, in which a substantial population resides in rural areas (ref. 5, 6, 7).”The authors should mention which countries and what proportions they mean.

In the introduction we say that little is known regarding the prevalence of HP in Central Europe. In Slovakia, Slovenia, Poland the rural population of the total population is 40-50%. In the Czech Republic, Austria, Germany, Switzerland the rural population of the total population is 25-35%. In Hungary it is around 30%, in Csongrád and Békés county it is 25%.

- Methods: “Platelia H. pylori IgG enzyme linked immunosorbent assay, which reportedly has 100% sensitivity and 90% specificity according to the manufacturer (Bio-Rad Marnes-la-Coquette, France).” The authors should provide the sensitivity and specificity data not according to the provider but rather to the publications in the literature, such as Burucoa et al., 2013 et al.

We can provide the sensitivity and specificity data of Platelia H. pylori IgG enzyme linked immunosorbent assay according to publication of Burucoa et al.

- Results: “There was no statistically significant difference in prevalence between males and females in our study.” Please, give the proportions and p values. The same for rural vs urban areas.

We complement the asked p values in the results.

- Discussion:

1. “In the surrounding Central European countries, such as the Czech Republic and Slovakia, the prevalence of HP infection followed the trends of our region, decreasing from 42% to 23% in the former from 62% to 35% in the latter (ref. 16, 17).” Over how many years?

We expanded the article with some details of referanced articles. In the surrounding Central European countries, such as the Czech Republic and Slovakia, the prevalence of HP infection followed the trends of our region, decreasing from 42% to 23% after 10 years in the former, from 62% to 35% after 15 years in the latter.

2. “sixfold higher risk of HP positivity than young urban females (61.29% vs. 11.11%).” The p value should be given as well.

We complemented p values.

3. “for at least 1 year” one should be given as a word (one instead of 1).

We replaced one from 1, expand the discussion.

4. What is the new, the contribution of the authors to the topic of H. pylori prevalence? The risk factors they found are well known in the literature. However, since there are few data from Hungary, the manuscript can be of interest.

We found two interesting new results in our study, the people who lived in rural conditions for at least one year also had an increased risk, and the presence of dyspeptic symptoms was identified as an independent risk factor in the young population.

5. In general, the authors should try to explain better the detected risk factors for the infection, and the significant values one by one.

We expand the discussion.

- Table and Figures • The authors included 6 tables and figures, there are too many and should be reduced. I suggest the authors to merge the table 1, 2 and 3 into one table.

In our opinion Table 1-3 are overview in separated tables, if according to the editor tables are better in massed form, we can agree it.

Reviewer #4:

I'm pleased to review the paper entitled "Epidemiologic characteristics of Helicobacter pylori infection in Southeast Hungary". Present article evaluated the prevalence of HP in Hungary and established the risk factors.

- Major point: Ethical considerations are needed. This study included participants under 20-year old.

Thank you for the comment. According to Hungarian legislation, persons are children under 18 years of age. From this age Hungarian citizens are legally adults and have all rights and duties.

- Minor points:

1. The overall prevalence of HP infection seemingly was "not" 32%, but seropositive rate was 32%. That is, positive predictive value for anti-HP antibody was calculated 82.5% (sensitivity 100%, specificity 90%, prevalence about 30%).

In the abstract, and in the results we corrected from overall prevalence of HP infection to overall seropositivity was 32%.

2. Please include current situation on H.pylori eradication in Hungary. With higher eradication rate, the exact prevalence was much lower.

National eradication study doesn't exist, but our work group in Csongrád region examined the success of *Helicobacter pylori* eradication therapy in out patients, compared the results from 2005 and 2010. The success rate of the first line eradication therapy was 74%. (343/460) and 70% (110/156), the second line eradication therapy 49% (41/83) and 51% (15/29) and the third line eradication therapy 21% (9/42) and 14% (2/14) respectively. In this current study only 1% of the subjects were reported about previous eradication therapy, significantly this can't change our results.

3. Please introduce a new concept "HP-associated dyspepsia".

The link between epigastric pain and HP seropositivity among young subjects supports the currently accepted, Rome IV diagnostic protocol for functional dyspepsia, which states the excluding HP infection (known as "HP-associated dyspepsia") should be the first step in the presence of such symptoms. (Stanghellini V, Chan FKL, Hasler WL, Malagelada JR, Suzuki H, Tack J, Talley NJ. Gastrointestinal disorders. *Gastroenterology* 2016;150:1380-1392.).

4. Two "positive"

The end of this comment might have been lost. Please resend it if it is mandatory.