

Lack of evidence for *Helicobacter pylori* to prevent children growth efficiently

We have read with great interest an article by Kocaoglu *et al* published in May issue of the *World Journal of Pediatrics*.^[1] A total of 243 children aged between 8-18 years were examined based on growth determinants and existence of *Helicobacter pylori* (*H. pylori*) colonization in Turkey. The conclusion of this research is that *H. pylori* colonization affected children growth; and the longer duration of infection, the worse effect on growth.

We have some points to improve this paper as following. 1) *H. pylori* usually causes a chronic infection which deleterious effects need long-term colonization to be revealed pathologically.^[2] In this study, the longest duration (*H. pylori* colonization as authors defined) was six months which is not sufficient for revealing all possible pathologic signs of this chronic infection. Moreover, height and weight determinants in children are strongly affected by various factors such as socioeconomic level, diet, emotional and physical status. Investigating growth status in children can hardly produce reliable result in the case investigating those limited factors; 2) In this study, authors suggested to eradicate the infection in the case of failure to thrive in children. Practically, this action is not feasible for many clear reasons; 3) Basic rationale in this survey was built up from a comparison between the results of various studies using serological methods to determine *H. pylori* presence. However, serology assay cannot determine whether active or past infection.

There are some limitations for this study. 1) Small sample size is the first limitation in this paper. However, larger population can produce more truthful conclusion; 2) Another limitation of this study is not-examining the rate of re-infection among these children and its effect on children growth. We now know that re-infection rate especially in developing countries such as Turkey is relatively high and it can easily affect primary results reported in this study.

In disagreement with authors, designing new public policy to detect high risk children to eradicate *H. pylori* infection (vaccination or antibiotic therapy) are likely complex and impossible at least in developing countries.

Amin Talebi Bezmín Abadi
Department of Bacteriology,
Faculty of Medical Sciences,

Tarbiat Modares University,
Tehran 14115-111, Iran
Email: Amin.talebi@modaers.ac.ir

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Our study involved the children exposed to C14-urea breath test to determine *H. pylori* infection after the admission because of dyspeptic complaints.^[1] Those with a history of *H. pylori* infection were excluded, and 243 patients, 131 with *H. pylori* infection and 112 without *H. pylori* infection, were determined. Twelve patients in the *H. pylori* positive group and 18 in the *H. pylori* negative group were excluded because of the incompliance with the follow-up or therapy and re-infection. Additionally, 13 patients in the *H. pylori* negative group were excluded because of *H. pylori* infection in a later period.

We completed our study with 200 participants between the ages of 8-18. Of these, 119 were in the *H.pylori* (+) group, while 81 were in the *H.pylori* (-) group (group 0 or control group). *H.pylori* (+) group was categorized into group 1 (≤ 1.5 mon), group 2 ($>1.5 \leq 6$ mon) and group 3 (>6 mon). The patient and control groups were monitored for 12 months regarding antropometric measurements. In addition, the patient group was monitored through C14-urea breath test in terms of effectiveness of treatment. The objective of our study was to investigate the effect of *H.pylori* infection on growth. Other possible pathologic signs related to *H.pylori* infection are out of the scope of our study.

In our study, mean growth velocity scores in *H. pylori* positive and negative groups were 0.49 ± 3.85 [95% confidence interval (CI), -0.21-1.18] and 1.98 ± 4.42 (95% CI, 1-2.96), respectively. Mean growth velocity scores in groups 1, 2 and 3 were 0.96 ± 3.84 , 0.16 ± 4.51 and -0.85 ± 3.09 , respectively. These findings indicated that

H. pylori infection affects growth negatively, and as time of exposure extends, the effect becomes more definite.

Growth is a multifactorial process affected by a number of factors.^[2] So, it is unlikely to evaluate merely a single factor by ignoring others. Investigating the effect of *H. pylori* infection on growth in a homogenous society as to socio-economic strata and ethnicity could reveal more reliable outcomes.^[3] Belonging to the same ethnic group and similar social class caused our study group to be homogeneous. We consider that the homogeneity presents a convenient opportunity to analyze other exogenous factors such as *H. pylori* infection in the development of failure to thrive.

One limitation of our study is the small sample size. Further studies with larger sample size will be more beneficial to enlighten the topic.

Although difficulties encountered in the treatment and eradication of *H. pylori* infection are proceeding,^[4,5] these issues lie beyond the scope of our study. Due to negative effect of *H. pylori* infection on growth, we propose that after ruling out more front-line reasons, children with failure to thrive should be evaluated regarding the existence of *H. pylori* infection. Failure to thrive can be prevented through the diagnosis and treatment of *H. pylori* infection as early as possible. Therefore, unnecessary investigations and procedures will have been avoided.

Celebi Kocaoglu

Konya Education and Research Hospital,
Department of Pediatric Intensive Care,
Konya, Turkey
Email: celebikocaoglu@hotmail.com

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