

Title: DECREASED PREVALENCE OF *Helicobacter pylori* INFECTION OVER TIME IN SOUTHERN BRAZIL

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Abstract:

The bacterium *Helicobacter pylori* has a worldwide distribution, and the acquisition may be related to some epidemiological factors such as age, sex, sanitary conditions, among others. However, a decrease in the prevalence of *H. pylori* infection has been reported in some countries in the last years. In this sense, this study aimed to assess the prevalence of *H. pylori* infection in south Brazil in patients undergoing upper endoscopy at different times over seven years. For this, we analysed three studies conducted in the periods 2008-2010, 2011-2012 and 2014-2015, at the University Hospital São Francisco de Paula in the city of Pelotas and at the University Hospital Dr. Miguel Riet Correa Jr., in the city of Rio Grande, where they were collected samples of gastric biopsy of dyspeptic patients. The detection of *H. pylori* was done by amplification of a fragment of *ureA* gene by polymerase chain reaction. The prevalence of *H. pylori* infection was of 50.0% (72/144), 33.6% (175/521) and 19.7% (37/188) for the periods 2008-2010, 2011-2012 and 2014-2015, respectively, and in all studies, the presence of *H. pylori* was more common in women over the age of 45 years. Despite the *H. pylori* infection to be mainly acquired during childhood, an increased prevalence is detected with age, probably because of a "cohort" effect, i.e., previous exposure to poor sanitation, in addition, signs and symptoms caused by *H. pylori* infection can manifest only in adulthood, when the bacterium has developed a persistent infection on gastric mucosa. Meanwhile, the relationship between *H. pylori* infection and the female sex does not present a plausible explanation, because usually the risk of acquiring *H. pylori* is equal in both sexes. Finally, the fall in the prevalence of *H. pylori* infection observed in southern Brazil, can be the result of better access to health and improvement in environmental conditions over time, and yet the misuse of antibiotics, which can result in high indices of therapeutic failures.

Keywords: *Helicobacter pylori*, prevalence, age, sex

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