Prevalence of infection and antibiotic susceptibility of helicobacter pylori: An evaluation in public and private health systems of Southern Chile

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Helicobacter pylori colonizes half of the human population. Age, ethnicity, and socioeconomic status are factors that influence the prevalence of the infection. This is important in southern Chile, one of the most unequal regions in the world, where a significant difference in the health access of the population occurs due to the existence of two competing health systems. Moreover, in the last few years, current protocols of H. pylori eradication have shown high rates of resistance with reduced therapeutic efficacy. This study reported the epidemiology of infection and attempted to identify divergent points among the population beneficiaries of the two health care schemes in southern Chile. Biopsies from public (n = 143) and private (n = 86) health systems were studied. At the same time, clinical and sociodemographic factors were evaluated. H. pylori strains were obtained from gastric biopsies for culture and molecular testing. Antibiotic susceptibility was determined by the agar dilution method. Differences about ethnicity, rural residence, and education (p ≤ 0.05) were observed between beneficiaries of the two health systems. The prevalence of H. pylori was 45%, with no significant differences regardless of the socioeconomic conditions. The only identified risk factor associated with H. pylori infection was Mapuche ethnicity (OR (odds ratio) = 2.30). H. pylori showed high resistance rates, particularly against clarithromycin (40%), levofloxacin (43.1%), and
metronidazole (81.8%). This study highlighted the importance of Mapuche ancestry as a risk factor in southern Chile and emphasized the need to search for new eradication strategies as well as further studies evaluating therapeutic efficacy. © 2019 by the authors. Licensee MDPI, Basel, Switzerland.

Antibiotic resistance
Prevalence of Helicobacter pylori infection
Public and private health systems
amoxicillin
clarithromycin
levofloxacin
metronidazole
tetracycline
agar dilution
antibiotic sensitivity
Article
bacterial clearance
bacterial colonization
bacterial strain
bacterium culture
bacterium identification
bacterium isolation
Chile
controlled study
cross-sectional study
DNA extraction
dyspepsia
endoscopy
female
health care
health insurance
Helicobacter infection
Helicobacter pylori
histopathology
human
human tissue
male
meta analysis
minimum inhibitory concentration
molecular biology
polymerase chain reaction
prevalence
public health service
stomach biopsy