

# World Congress and Exhibition on Antibiotics

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## Changes in antibiotic sensitivity in children with *Helicobacter pylori* infection

Marco Manfredi

University of Parma, Italy

*Helicobacter pylori* (*H. pylori*) infection is one of the most common infections in humans. Although many efforts have been made in trying eradication, several difficulties remain to be overcome both in children and adults. During the last years, the widespread use/abuse of antibiotics led to the emergence of increasing resistances of *H. pylori* infection to common antibiotics. ESPGHAN/NASPGHAN guidelines recommend antibiotic susceptibility testing for Clarithromycin before starting Clarithromycin-based triple therapy in areas/populations with a known high resistance rate. In Italy Clarithromycin resistance rate is around 25%. We evaluated the variations in primary antibiotic sensitivity over last 13 years in children with *H. pylori* infection in Parma, northern Italy comparing with our previous results obtained in 1998/99. Throughout the last 13 years, we obtained a significant reduction in Metronidazole resistance (57% vs 33%) ( $p=0.014$ ), while the Clarithromycin resistance evidently increased although with no statistically significant value (16% vs 26%) ( $p=0.142$ ). During these years resistance to ampicillin has been confirmed very low or absent (3% in 1998/99 and none in 2011/2012) as well as that to tetracyclines (2% in 1998/99 and none in 2011/12); in the same way the combined resistance to Metronidazole and Clarithromycin together has not been changed, staying very low (8% in 1998/99 and 7% in 2011/12). The eradication of *H. pylori* infection represents an enormous challenge in gastroenterology. Considering this organism lives in an environment not easily accessible to many drugs, the increasing antibiotic resistance is a burden that we must fight every day. To know the local prevalence of antibiotic resistances is important also for choosing the better therapy mainly if the antibiotic sensitivity does not develop from the culture, therefore we must use an empirical eradication treatment. Comparing our study with the previous one (executed in 1998/99), we obtained some changes in antibiotic resistance rate over the last 13 years. Metronidazole resistance significantly decreased and that to Clarithromycin increased although with no statistically significant value. Furthermore we confirmed that the resistance rate of *H. pylori* to amoxicillin is very rare around the world. Therefore before recommending *H. pylori* eradication therapy, we should know either the antibiotic susceptibility of patient or the local distribution of antibiotic resistance rates to have higher successful probabilities.

### Biography

Marco Manfredi MD, PhD carried out his education at Parma University, Italy (Medical Degree, post graduate degree in General Pediatrics and in Gastroenterology), where he also completed his PhD in Pediatric Gastroenterology. By now he is Assistant Manager in Pediatrics and in Pediatric Gastroenterology at Azienda Ospedaliero- Universitaria of Parma, University Hospital, Parma, Italy. His main fields of interest are *Helicobacter pylori* infection, Celiac Disease, acid-related gastrointestinal diseases, IBD. He has published more than 60 papers, included chapters of textbooks and is a scientific reviewer for several reputed medical journals. He is member of Italian Society of Pediatric Gastroenterology and Nutrition (SIGENP).

[marco.manfredi8@gmail.com](mailto:marco.manfredi8@gmail.com)

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