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Title of diploma thesis: Detection of *Helicobacter pylori* infection

Abstract

The issue of *Helicobacter pylori* (HP) infection is a very hot topic in gastroenterology and it evolves rapidly due to a great amount of new information. HP is a spiral bacterium colonizing human gaster and duodenum. The bacterium itself is adapted to the acid enviroment of the gaster. Since its first characterization by Marshall and Warren in 1984, the HP has been known as an agens causeing gastritis, peptic ulcers and gastric cancer. Besides its well-demonstrated role in gastroduodenal disease, some authors have proposed a link between HP and number of extragastric disease involving the cardiovascular, dermatological, hematological and immunological systems. The HP infection can be diagnosed by several methods. These are classified as either invasive or non-invasive according to the use of endoscopy. The invasive ones are histological examination, rapid urease test, cultivation and some molecular techniques. The non-invasive ones are serological examination, breath test and a detection of HP antigen in stools. The last method mentioned is simple, cheaper and almost as precise as the breath test.

In my diploma thesis I compile information about *Helicobacter pylori* and gastric and extragastric diseases caused by HP bacteria. I have gained the data about patients examined with the detection method of the HP antigen (Ag) in stools and cultivation from the Department of microbiology, University hospital in Hradec Králové. I have created an overview of the HP presence based on the method, number of examined patients and their age in a defined period. Then I dealt with the HP treatment options and its increasing antimicrobial resistance.