No. 14 – Helicobacter pylori and

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Title: **Helicobacter pylori and Idiopathic Thrombocytopenic Purpura – Where Do We Stand?**

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Introduction

Helicobacter pylori (H. pylori) is a microorganism, more specifically a bacterium, that can infect the human stomach. It can cause several gastrointestinal disorders, including gastritis, peptic ulcer disease, non-ulcer dyspepsia, gastric adenocarcinoma and gastric lymphoma. Several investigators have studied whether H. pylori causes non-digestive diseases, but these associations, if any, are uncertain.

The relationship between H. pylori infection and idiopathic thrombocytopenic purpura (ITP) has been investigated since 1998, when an Italian group reported a significant increase of the platelet count in eight of the 11 ITP patients in whom the bacterium was eradicated. However, subsequent reports have produced inconsistent results, and the effects of H. pylori eradication in the management of patients with ITP have remained undetermined. I'll try to answer here some of the most common questions that are asked about H. pylori.

1) How frequent is H. pylori infection?

The rate of persons with H. pylori infection varies greatly between countries and increases with age. Adults from developing countries show a prevalence (total number of cases) approaching 80% of the population, whereas rates of <50% are seen in developed countries. An estimated total of 7.5 million people living in England and Wales have an active infection. This number includes mostly individuals with an age greater than 60 years. Children below 10 years of age are rarely infected.

2) Is H. pylori more frequent in ITP patients than in the general population?

Indirect evidence from the various cases series reported in the literature suggest that H. pylori infection is not more frequent in ITP than in the general population. I have to acknowledge, however, that this is not considered strong evidence. To answer definitely to that question we need to perform a case-control study.

3) What are the symptoms of H. pylori infection?

Most cases of H. pylori infection produce no symptoms at all. If you have an H. pylori-related disease, you may experience an ache or burning pain in your abdomen, a change in appetite with weight loss, nausea, vomiting, frequent burping, or bloating.

4) How can one diagnose H. pylori infection?

It can be done in several ways. The easiest are non invasive methods, including the urea breath test, the stool antigen test, and serum antibody measurement. Serum antibody measurement is not very accurate and cannot be used to cannot be used to determine whether H. pylori has been actually eradicated after treatment, but can be an option when other test are not available.

5) What if I am found with H. pylori infection?

Because of the number of GI diseases it can produce, once we have found H. pylori, it is common sense to get rid it. To eradicate H. pylori, we use a combination of antibiotics and drugs that inhibit gastric acid secretion ("proton pump inhibitors"). Antibiotics are usually given for one to two weeks.

6) What is the chance of recovering from ITP if I get rid of H. pylori?

In countries such as Japan, the response rate to H. pylori eradication are high, around 50%. In the UK the chances are much lower, probably less than 10%.

7) Do you advice routine screening and eventual treatment for H. pylori infection even if the chances of response are very low? Yes, I do. Considering the low costs, non-invasiveness of diagnostic methods and the favourable toxicity profile of eradication therapy compared with standard ITP therapy, the detection and eradication of H. pylori infection should be considered even when a platelet response is not likely.

Summary

Unfortunately, several other questions related to H. pylori infection remained unanswered. Some of these can only be answered by identifying the mechanisms that link H. pylori to the development of the thrombocytopenia (the low platelet count). These mechanisms are actively investigated, and hopefully they should produce results that can help better manage our patients with ITP.