

Effect of bacterial and host factors on Helicobacter pylori eradication therapy

Type: Review

Abstract:

Introduction: A clearer understanding of the factors affecting the cure rate of Helicobacter pylori infection might lead to the development of novel prevention strategies and therapeutic targets. Areas covered: This review covers two important issues that affect the eradication of H. pylori: bacterial and host factors. Several virulence factors have been shown to be predictors for gastroduodenal diseases. Successful treatment of H. pylori infection also depends on host genetic factors such as CYP2C19 and IL-1B. The latest evidence on host genetic factors is discussed. Expert opinion: The authors identify three main targets for achieving effective eradication therapy. The first therapeutic target is to identify counter measures for antibiotic-resistant H. pylori strains. Thus, antibiotic susceptibility should be checked in all patients, ideally, before the start of eradication treatment. The second therapeutic target is the inhibition of acid suppression. Maintaining a high intragastric pH for 24 h increases the effectiveness of some antibiotics and the eradication effects for H. pylori. The third therapeutic target is to identify high-risk groups; the CYP2C19 and IL-1B polymorphisms are candidates for significant risk factors. A personalized medical approach will likely increase the cure rate of H. pylori infection.

Author	a) Uotani T., b) Miftahussurur M., c) Yamaoka Y.
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