

Impact of *Helicobacter pylori* treatment on the risk of incident nonalcoholic fatty liver disease

성균관대학교 삼성서울병원 내과

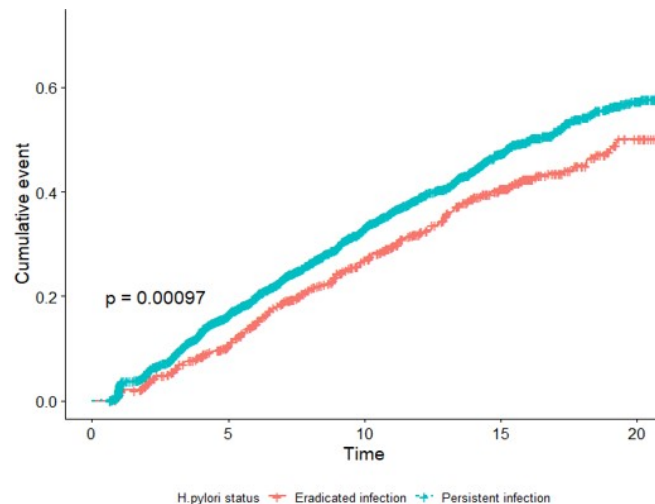
김지원, 김태준, 이혁

Background/Aims: Previous studies reported an association between *Helicobacter pylori* (*H. pylori*) infection and nonalcoholic fatty liver disease (NAFLD), yet it is now questioned about whether *H. pylori* treatment reduces the risk for incident NAFLD.

Methods: This retrospective cohort study included 3,780 adults without NAFLD at baseline, who had infected with *H. pylori*, between January 1995 and January 2020. *H. pylori* infection was determined by *H. pylori*-specific immunoglobulin G antibody test. Fatty liver was diagnosed by ultrasound.

Results: During a median follow-up of 7.9 years, NAFLD developed in 1,294 participants. In a multivariable model adjusted for age, sex, body mass index (BMI), smoking status, alcohol intake, and metabolic variables, the no-treatment (for *H. pylori*) group exhibited a higher risk of incident NAFLD than the treatment group [hazard ratio (HR), 1.36; 95% confidence interval (CI), 1.18-1.56]. In the multivariable analysis, higher BMI (HR, 1.19; 95% CI, 1.16-1.22), current smoking (HR, 1.27; 95% CI, 1.10-1.45), several metabolic abnormalities (higher glucose level, lower high-density lipoprotein cholesterol level, and higher triglycerides level) were significant risk factors for NAFLD. Subgroup analysis also revealed that no-treatment for *H. pylori* infection was correlated to an increased risk of NAFLD.

Conclusions: *H. pylori* treatment was associated with a decreased risk of NAFLD development. *H. pylori* infection may have a pathophysiological role in NAFLD development and, after successful eradication of *H. pylori*, the risk of incident NAFLD might decrease.



Participants who underwent at least two health check-ups including abdominal ultrasound taken at least 1 year apart (n=14,231)

- Excluded as following reasons (n=10,451)
- Fatty liver on abdominal sonography at baseline (n=3289)
 - *Helicobacter pylori* negativity (n=5966)
 - Self-reported history of malignancy (n=433)
 - Self-reported history of chronic liver disease or cirrhosis (n=489)
 - Alcohol intake ≥ 30 g/day (n=343)
 - Positive serologic markers for hepatitis B or C virus (n=141)

Participants free from non-alcoholic fatty liver disease included in the analysis (n=3780)