Association between *Helicobacter pylori* Infection and Pancreatic Cancer: A Cumulative Meta-Analysis

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ABSTRACT

**Context** Infection with *Helicobacter pylori* (*H. pylori*) has been implicated in the etiopathogenesis of various malignant conditions. Notwithstanding, its etiological association with pancreatic cancer remains inconclusive. Studies focusing on the relationship between *H. pylori* infection and pancreatic cancer risk have yielded conflicting results. **Objective** The aim of this study was to obtain a reliable estimate of the risk of *H. pylori* infection in causing pancreatic cancer, by performing a meta-analysis of the existing observational studies evaluating the association. **Methods/Statistics** Observational studies comparing the prevalence of *H. pylori* infection in patients with pancreatic cancer and healthy controls, conducted in adult populations and published in all languages, were identified through systematic search in the MEDLINE and EMBASE up to April 2010. *H. pylori* infection was confirmed by serological testing using an antigen-specific enzyme-linked immunosorbent assay. Pooled adjusted odds ratios (AOR) and associated 95% confidence intervals (CI) were obtained by using a DerSimonian and Laird random-effects model. **Results** Six studies involving a total of 2,335 patients met our eligibility criteria. A significant association between *H. pylori* seropositivity and development of pancreatic cancer (OR 1.38, 95% CI 1.08 to 1.75; P=0.009) was seen. No significant association was seen on pooled analysis of the 3 studies assessing the relationship between CagA positivity and pancreatic cancer. A cumulative meta-analysis suggested a reducing, albeit statistically significant association as the evidence was accumulated. **Conclusions** The pooled data suggests an association between infection with *H. pylori* and the development of pancreatic cancer. Further research is needed to confirm our findings.