

中文題目：幽門桿菌的感染與阿茲海默症的研究

英文題目：The relationship between *Helicobacter pylori* infection and the Alzheimer's disease

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Background: Alzheimer's disease (AD) is the most common form of dementia. Eradication of *Helicobacter pylori* (*H. pylori*) could affect the incidence and progression of many diseases; however, there are limited studies of the association between *H. pylori* eradication and AD outcome. We utilized the National Health Insurance Research Database (NHIRD) of Taiwan to determine the relationship between *H. pylori* eradication and AD in a diabetes mellitus (DM) population.

Method: We collected data from the NHIRD and the Diabetes Mellitus Health Database in Taiwan of patients without a prior diagnosis of AD. We specified three cohorts: patients with (1) peptic ulcer disease (PUD) but no *H. pylori* treatment, without DM (PUD-HPRx in GP); (2) PUD and DM, but no *H. pylori* eradication therapy (PUD-HPRx in DM); (3) PUD and DM, with *H. pylori* eradication therapy (PUD+HPRx in DM). All cohorts were matched according to age, sex, Charlson Comorbidity Index score, and comorbidities.

Results: Data were collected from 2000 to 2010, and 157,231 patients were enrolled in total. We compared the effects of treatment for *H. pylori* infection on the incidence and mortality of AD. The patients with DM who received *H. pylori* eradication therapy had a higher incidence of AD than the general population (adjusted hazard ratio of incidence [aHR], 1.088). Subgroup analysis showed that the risk of AD was higher in the younger patients who received *H. pylori* eradication therapy as compared with those who did not (aHR for younger than 45 years, 1.071; aHR of age 45-54 years, 1.089; aHR of age 55-64 years, 1.079) However, a lower mortality rate was observed in the PUD+HPRx in DM group (aHR, 0.945, compared with PUD-HPRx in DM; $P < 0.001$).

Conclusion: In this study, we demonstrated that DM patients who underwent treatment for eradication of *H. pylori* had a higher incidence of AD, especially younger patients. Nevertheless, there was a lower mortality rate in patients who received *H. pylori* treatment. Further study is needed to clarify the interrelated roles of AD and eradication therapy for *H. pylori*.