

中文題目：第二型糖尿病與幽門螺旋桿菌感染之相關性。

英文題目：The correlation between type II DM and chronic *helicobacter pylori* infection

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Background: Chronic *Helicobacter pylori* (*H. pylori*) infection is one of the most prevalent chronic diseases worldwide and has been associated with the pathogenesis of type 2 diabetes Mellitus (DM). This study was designed to investigate whether chronic *H. pylori* infection was associated with increased level of glycated hemoglobin (HbA1c) in a Taiwanese population.

Methods: A total of 827 cases in Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, were included in this study. The exclusion criteria including those who had received *H. pylori* eradication, took proton pump inhibitors and had major co-morbidities during the study period. The status of *H. pylori* infection was determined by either positive culture results or two positive results of the following tests, including histology and rapid-urease test from biopsy specimens and C¹³ urea breath test (C¹³ UBT). The serum level of HbA1c was tested. The diagnosis of type 2 Diabetes mellitus is diagnosed by either one of the following: fasting plasma glucose level more than 7.0 mmol/L (126 mg/dL), plasma glucose more than 11.1 mmol/L (200 mg/dL) two hours after a 75 g oral glucose load as in a glucose tolerance test, symptoms of hyperglycemia and casual plasma glucose more than \geq 11.1 mmol/L (200 mg/dL), and glycated hemoglobin (Hb A1C) \geq 6.5%.

Results: In the chronic *H. pylori* infection group, the serum level of HbA1C was significantly higher (5.82% vs. 5.62%, $p < 0.001$), and the diagnosis of type 2 DM (14.1% vs. 7.1%, $p = 0.009$) was significantly more prevalent than the non-infection counterpart. Interestingly, in the chronic *H. pylori* infection group, subjects more than 55 years old had even higher HbA1c level, as compared to their age-matched, non-infection counterpart.

Conclusions: We found a significant association between chronic *H. pylori* infection and high level of HbA1c and the diagnosis of type 2 DM in a Taiwanese population. This observation provides a link to chronic infection and the pathogenesis of DM. Screening and management of chronic *H. pylori* infection may help monitoring blood glucose and HbA1c levels. Eradication of chronic *H. pylori* infection might be an effective measure for prevention and management of type 2 DM, especially in the early stage of disease.