



## The prevalence of the duodenal ulcer promoting gene (dupA) in *Helicobacter pylori* isolates varies by ethnic group and is not universally associated with disease development: a case-control study.

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Abstract: ABSTRACT: BACKGROUND: The putative *H. pylori* pathogenicity-associated factor dupA has been associated with IL-8 induction in vitro, and duodenal ulcer (DU) and gastric cancer (GC) development in certain populations, but this association is inconsistent between studies. We aimed to investigate dupA prevalence in clinical isolates from Sweden, Australia and from ethnic Chinese, Indians and Malays resident in Malaysia and Singapore and to examine the association with DU and GC. In addition we investigated the sequence diversity between isolates from these diverse groups and compared the level of IL-8 secretion in isolates possessing and lacking dupA. METHODS: PCR primers were designed to amplify over the C/T insertion denoting a continuous dupA. PCR products from 29 clinical isolates were sequenced and compared with sequences from three additional strains obtained from GenBank. Clinical isolates from 21 Malaysian patients (8 dupA-positive, 14 dupA-negative) were assessed for their ability to induce IL-8 in AGS cells in vitro. Statistical analysis was performed using Fisher's exact test. RESULTS: The prevalence of dupA in isolates from Swedish functional dyspepsia (FD) control patients (65%, 13/20) was higher and in isolates from Indian FD patients (7.1%, 3/42) was lower as compared with isolates from Chinese (28.9%, 13/49,  $P = 0.005$ ,  $P = 0.025$ ), Malay (35.7%, 5/14,  $P = 0.16$ ,  $P = 0.018$ ) and Australian (37.8%, 17/45,  $P = 0.060$ ,  $P$

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