

中文題目：幽門螺旋桿菌影響胃癌上皮細胞 HDGF 的表現

英文題目：Helicobacter Pylori Involves the Regulation of Hepatoma-Derived Growth Factor in Gastric Cancer Cell

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**Background and aims:** Helicobacter pylori (H. pylori) infection is a major risk factor in the development of gastric cancer and several factors involve in this multistep process of gastric carcinogenesis. Hepatoma-derived growth factor (HDGF) participate in tumorigenesis of many cancers and is an independent prognostic factor in patients with gastric cancer. The role of HDGF on the H. pylori induced gastric carcinogenesis is unclear. The present study investigate the cellular HDGF level influenced by H. pylori infection and the influence of HDGF level on survival rate and epithelial-mesenchymal transition (EMT) in H. pylori infected gastric adenocarcinoma cell.

**Methods:** The gastric adenocarcinoma cell line, AGS, was cultured with H. pylori strain ATCC49503 (CagA+, vacA+, s1/m1), ATCC51932(CagA-, vacA+, s2/m2) in an in vitro infection model. Real-time PCR was used to quantify gene expression of HDGF, Snail, Slug, Twist, E-cadherin and Vimentin. West blotting, immunofluorescence analysis and ELISA were used for the measurement of protein expression, including HDGF, E-cadherin and Vimentin.

**Results:** ATCC49503 strain significantly increased the HDGF level in AGS cells, whereas the same effect did not found in AGS cells infected by ATCC51932 strain. The releasing level of HDGF from ATCC49503 strain infected AGS cells also significantly increased as compared with control group ( $p < 0.05$ ). Higher HDGF level showed protective effect on H. pylori infected AGS cells and promote proliferation of AGS cells as compared with AGS cells without HDGF ( $P < 0.05$ ). The HDGF significantly upregulated EMT-associated genes Snail, Slug, Twist and Vimentin, and the E-cadherin gene expression was reduced by HDGF.

**Conclusions:** Our results suggest that H. pylori virulent factor, CagA, is associated with the production of HDGF in AGS cells and HDGF promotes growth of cancer cell. The HDGF also influences the EMT by regulating Snail, Slug, Twist, Vimentin and E-cadherin and HDGF may be a factor that associated with gastric carcinogenesis and metastasis.