

EVALUATION OF THE TITERS OF ANTI-HELICOBACTER PYLORI-HSP60 ANTIBODIES IN THE CORONARY SYNDROME PATIENTS

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BACKGROUNDS

Many reports have indicated that inflammation and immune response are necessary for the development of atherosclerosis. The immune reactions via bacterial heat shock protein 60 (HSP60) such as *Chlamydia pneumoniae*-HSP60 are closely related to coronary syndromes (CS) caused by atherosclerosis. A recent Japanese study revealed that the prevalence of cerebral infarction caused by atherosclerosis was closely related to the seropositivity of *Helicobacter pylori* (Hp). In this study, we evaluated the titers of anti-Hp-HSP60 antibodies in the CS patients in detail.

MATERIALS AND METHODS

We investigated the antibody titers using ELISA. The Hp sonic extract (Hp-lysate), the whole length of Hp-HSP60 recombinant protein (Hp-HSP60w) and human-HSP60 (Hu-HSP60) were employed as antigens. The two partial fragments of Hp-HSP60 (Hp-HSP60₂, Hp-HSP60₄₅), which have similar amino acids sequences to Hu-HSP60, were also used as antigens. The sera of coronary syndrome patients (n=145) and gastric ulcer (GU) patients (n=95) were obtained from Okayama University Hospital.

RESULTS

The titers of anti-Hp-HSP60w antibodies in CS patients were significantly higher than those in GU patients. The titers of anti-Hu-HSP60 antibodies in CS were also higher than those in GU. Interestingly, the titers of Hp-HSP60₂ antibodies were closely related to those of Hu-HSP60 in CS patients but not in GU patients.

DISCUSSIONS

These data suggest that the acquired immune responses against the self-HSP60 (Hu-HSP60) were generated via Hp-HSP60₂ due to the molecular mimicry in CS patients. These autoimmune responses seem to promote the pathogenesis of atherosclerosis.

Key words: Atherosclerosis, HSP60, *H. pylori*