Immunodominant antigens of Helicobacter pylori strains isolated from patients with different gastroduodenal diseases.


Abstract

OBJECTIVE:

To detect the immunogenic proteins in Helicobacter pylori (H. pylori) strains isolated from patients with different gastric diseases.

METHODS:

We performed this study in the Clinical Microbiology Research Center, Shiraz University of Medical Sciences, Shiraz, Iran, during July 2003 to September 2004. Total proteins of H. pylori strains isolated from the gastric biopsies of 3 groups of patients were separated by 1D-SDS-PAGE and then blotted with the sera of their respective hosts.

RESULTS:

In SDS-PAGE the members of each group showed high correlation according to similarity in their patterns, resulting in considering them in the same cluster. The patterns of immunoblots differed from that of Coomassie Brilliant Blue stained gels. The blotting method did not recognize some of the protein bands in the SDS-PAGE. Only the bands of 106 and 45 kDa from H. pylori strains isolated from patients with gastric cancer were significantly (p<0.05) recognized specifically with the sera of their respective patients, and the band of 13 kDa was recognized specifically (p<0.05) with the sera of nonulceric patients. With the exception of these bands, in the patterns of blotting of the sera from all patients no significant differences were observed.

CONCLUSION:

By using 1D blotting methods we could find 2 antigenic protein bands (106 and 45 kDa) for H. pylori strains isolated from cancerous patients, and one (13 kDa) for the strains isolated from nonulceric patients, which were specifically recognized with their respective host.