Indications for Immunohistochemistry for Helicobacter pylori in Gastric Biopsies: A Retrospective Study

Jingyang Feng, MD, Kim M. Parker, MD
Department of Pathology, Baptist Health System, Birmingham, AL

Helicobacter pylori is considered an important causative factor in multiple gastric disorders. Efficient detection of this organism in gastric biopsy samples is very important for patient care. This retrospective study aims to review the histopathologic features that best correlate with false-negative H pylori results on modified Giemsa stain and to determine which gastric biopsy cases are most likely to benefit from immunohistochemistry (IHC) staining for H pylori. A total of 931 Giemsa-negative gastric biopsy specimens were stained with IHC at our hospitals in the past 5 years. We reviewed the slides of 68 cases with negative Giemsa but positive IHC stain for H pylori and graded the density of the organism and superficial mucus/acute inflammatory exudates according to the updated Sydney system. In addition, an equal number Giemsa-positive cases in the same period at our hospitals were selected randomly and used as controls. Of 613 cases with chronic active gastritis 54 (8.8%) were positive for H pylori on IHC stain, as were 14 of 318 cases with inactive conditions (4.4%). The \( \chi^2 \) test shows that the IHC-positive rate between chronic active gastritis and inactive conditions is significantly different (\( P < .05 \)). The percentage of cases with low H pylori density in the Giemsa-negative/IHC-positive group is significantly higher than that in Giemsa-positive group (\( P < .01 \)). In addition, there is a significant difference in the positive rate of superficial mucus/acute inflammatory exudates between these 2 groups (\( P < .01 \)). Our study indicated that IHC staining may not be necessary for cases without active gastritis. For Giemsa-negative cases, if marked superficial mucus and acute inflammatory exudates are present or when the density of H pylori is expected to be low, as may occur in posttreatment biopsies, IHC stain should be considered.

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