Histopathological Features of Gastritis before and after Treatment for *Helicobacter pylori*

Jasminka Jakšić-Razumović, Damir Tentor, Vesna Kušec¹, Snježana Cužić, Tomislav Brkić²
Department of Clinical Pathology, ¹Clinical Institute of Laboratory Diagnosis, and ²Department of Internal Medicine, Zagreb University Hospital Center, Zagreb, Croatia

**Aim.** To assess five main histological features of gastritis in gastric mucosa colonized with *Helicobacter pylori* before and after the treatment.

**Methods.** Histologic assessment of *H. pylori*-associated gastritis was performed according to the Sydney classification before and after the treatment in 97 patients. Two additional parameters – the presence of lymphocytic aggregates and coccoid forms of bacteria – were also analyzed. Helical and coccoid forms of *H. pylori* were detected by immunohistochemistry in biopsies after the treatment.

**Results.** Whereas acute epithelial damage was quickly repaired, some of the local responses to bacteria, e.g., lymphoid aggregates and intestinal metaplasia, persisted after treatment. Higher *H. pylori* and cocci density was found before and after treatment in patients with intestinal metaplasia (p=0.020). Correlation between *H. pylori* and mucosal atrophy was found only after treatment (p=0.009). Immunohistochemical staining was more sensitive in detecting of *H. pylori* than Giemsa staining (p=0.007) in cases where, using only Giemsa staining, it was not possible to distinguish coccoid forms of *H. pylori* from other cocci.

**Conclusion.** After treatment, *H. pylori*-associated gastritis showed reduction of acute and chronic inflammation, but lymphoid aggregates and intestinal metaplasia persisted. Immunohistochemistry of different forms of *H. pylori* may be a valuable technique in monitoring the success of the treatment.

**Key words:** biopsy; campylobacter pylori; gastritis; gastritis, atrophic; helicobacter infections; helicobacter pylori; metaplasia, intestinal; stomach diseases