

“Identification of *Helicobacter pylori* in gastric biopsies: comparison of the results of the rapid urease test with the histological Giemsa staining technique”

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Abstract:

Helicobacter pylori (*H. pylori*) remains a prevalent chronic infection in the developing countries. *H. pylori* is an important agent associated with peptic ulcer disease, chronic gastritis and gastric malignancies. It can be detected by various invasive (rapid urease test and histology) and non-invasive tests (stool antigen test, urea breath test and serology). Aim of this study was to compare the performance of the Rapid Urease Test (RUT) with histological Giemsa staining technique. Data was collected from histopathology reports of antral biopsies, endoscopy and RUT reports of the patients (n=429) who underwent endoscopic examination at the Lanka Hospital from July 2013 to May 2014. The overall positivity for *H. pylori* was considered when either or both tests were positive. *H. pylori* were found in 183 (42.65%) patients by the RUT method and in 191(44.55%) patients with the Giemsa staining technique. Only 18 (4.19%) cases showed dis-concordant results between Giemsa staining and the RUT method. With 95% confidence interval, proportion of the dis-concordant result (18/429) of two identification techniques is not statistically significant (p-value=1.00). Sensitivity and specificity of the Giemsa staining method was 98.45% & 100% and the RUT was 88.14%, 94.89% respectively. Even though no statistical significance was found for dis-concordant results by both methods, substitution of the RUT test by the histopathology Giemsa staining technique should be considered with caution.

Key Words: *Helicobacter pylori*, Rapid Urease Test, *Helicobacter pylori*