

Compression of Histopathology, Culture and Rapid Urease Test in Diagnosis of *Helicobacter Pylori* in Gastric Biopsy Specimens

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Received: 10 Feb 2014

Revised: 29 Jun 2014

Accepted: 10 Jul 2014

Abstract

Background and Objective: *Helicobacter pylori* (*H. Pylori*) infection is related to chronic gastritis, peptic ulcer, duodenal ulcer and gastric cancer. Thus, identification and treatment of the infection have a considerable importance. The aim of this study was to compare three methods of Histopathology, Culture and Rapid Urease test (RUT) in identification of *H. Pylori* in gastric biopsy specimens.

Material and Methods: The participants were 153 patients (64 women and 89 men) suffering from digestive complaints, who referred to the endoscopy department of Shahid Beheshi Hospital in Hamadan, Iran. Three gastric biopsy samples were collected from each patient and examined by standard RUT, Histopathology and culture methods for diagnosis of *H. Pylori*.

Results: Out of 153 patients, 69.9%, 27.4% and 2.6 % had gastritis, gastric ulcer and gastric cancer, respectively. The rate of infection with Urease test, culture and histology were identified 49.7%, 54.2%, and 89.5%, respectively. The sensitivity and specificity of the RUT result at first hour and after the first up to 24 hours were 55.4% and 80%, and 55.4% and 66/7%, respectively. The sensitivity and specificity of culture method were 60.6% and 100%, respectively.

Conclusion: Based on the results, Histopathology method has a more sensitivity than both Culture method and rapid urease test for diagnosis of *H. Pylori*, and RUT is more specific when done in the first hour rather than after the first hour.

Key words: *Helicobacter pylori*, rapid urease test methods, RUT, Histopathology