

AI 02 Accuracy of the stool antigen test as a non-invasive method to diagnose *Helicobacter pylori* infection in patients with upper gastrointestinal symptoms

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The commonest diagnostic technique of *Helicobacter pylori* infection in Sri Lanka is histology using haematoxylin and eosin staining. Histology requires gastric biopsy specimens and the procedure is invasive. The use of non invasive tests to diagnose the infection is sparse in our setup. We intended to find out the specificity and sensitivity of non- invasive stool antigen test to detect *H.pylori* infection, taking histology as the gold standard. Forty eight patients (30 males) who underwent endoscopy were studied using five gastric biopsy specimens (3-antral, 2-corporal) from each patient for detection of *H.pylori* histologically. A stool sample was also collected from each patient to detect *H.pylori* stool antigen by Enzyme Linked Immuno-Sorbent Assay. The mean age (SD) of the patients was 49.4(15.8) years. The prevalence of *H.pylori* infection was 79.2% (38/48) histologically. All patients had histological evidence of chronic gastric inflammation. Activity (polymorphonuclear neutrophil activity) was present in 95.8% of patients. Seven patients were positive by the stool antigen test. Of the 38 patients who had *H.pylori* histologically, only 3 were positive for the stool antigen. Of the 10 patients who were negative for *H.pylori* histologically, 6 were negative for the stool antigen (sensitivity- 7.9%, specificity-60%). The positive and negative predictive values of the stool antigen test were 42.9% and 14.6% respectively. All seven patients who were found positive by stool antigen test had inflammation and activity in their gastric biopsy specimens. The stool antigen test has a low specificity and very low sensitivity in detecting *H.pylori* infection in this particular study. However, further studies involving larger samples would give more conclusive results.

Keywords: *Helicobacter pylori*, gastric biopsy, histology, antigen