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Modified rapid urease test for the detection of *Helicobacter pylori* from gastric biopsies in patients with dyspepsia

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Up to now, rapid detection of *Helicobacter pylori* is still a problem due to its difficulty in culturing and having accurate histopathology result. In clinical setting, internists usually perform urea breath test. In laboratory setting, urease test, MIU test, culture, PCR and histopathology examination are utilized for detecting *Helicobacter pylori*. The objective of this study is to detect *H. pylori* in gastric biopsies using a modified rapid urease test. This is a cross sectional study. We obtained gastric tissue biopsy specimens (antrum and corpus) from untreated dyspepsia patients who come to Gastroenterohepatology Division, Department of Internal Medicine, dr. Cipto Mangunkusumo General Hospital, Jakarta, Indonesia. One set of specimen was fixated in 10% formalin and was sent to Anatomy Pathology Laboratory. The other was sent directly to Microbiology Laboratory without fixation. Rapid Urease Test medium was prepared by modifying Christensen Urea and Motility Indole Urease Test. Urea concentration, pH indicator concentration (phenol red) and incubation temperature were optimized. The optimum concentration of urea was 40%, while the optimum concentration of phenol red was 0.5%. Of 34 samples, 12 (35.3%) were positive by rapid urease test (RUT) (either antrum and/or corpus). There were 2 (5.8%) samples which only positive by histopathology examination, 7 (20.6%) samples were only positive by RUT and 5 (14.7%) samples were positive by histopathology and RUT (14.7%). We assumed that *Helicobacter pylori* detection should not only based on histopathology examination, but also in combination with RUT.

Biography

Angky Budianti has completed her Post-graduate training program in Clinical Microbiology from University of Indonesia. She is an Academic Staff at the Department of Microbiology, Faculty of Medicine, University of Indonesia, since 2010. She also works as a Clinical Microbiologist in Clinical Microbiology Laboratory in several hospitals in Tangerang, Indonesia. She is currently a candidate of PhD program in Medical Sciences at Faculty of Medicine, University of Indonesia.

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