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Real-time polymerase chain reaction assay for the detection of *H. pylori* in patients with dyspepsia: Comparison with histopathology examinationMardiasuti^{1,2}¹University of Indonesia, Indonesia²dr. Cipto Mangunkusumo National Central General Hospital, Indonesia

Helicobacter pylori infection is still a health problem in Indonesia and may lead to malignancy. Early detection may increase the effectiveness of treatments and prevent complications. This study was aimed to determine the accuracy of real-time Polymerase Chain Reaction (rPCR) compare to histopathology examinations. Endoscopies of antral and corporal biopsies were performed in 34 consecutive patients with dyspepsia who did not take antibiotics and proton pump inhibitor for two weeks (February-October 2017). The tissue biopsies were stained with HE and the rPCR was conducted using primers previously. The thermal cycle of rPCR was 95 °C, 3'; 45 cycles of denaturation 95 °C, 15"; annealing temperature was 64 °C, 1'. The primer and probe concentration were 0.8 µM and 0.6 µM, respectively. Some of the positive specimens were sequenced to confirm the presence of *H. pylori*. The minimal DNA concentration detected was 3.8 10⁻¹¹ ng/ul. No other microbes showed positive result. Real-time PCR revealed a higher positivity rate 32.35% (11/34) compared to histopathology examinations 20.59% (7/34). The positivity rate of rPCR from the antral was higher than from the corporal specimens. There was only one discordance result in which histopathology showed a positive result, while the rPCR was negative. All of specimens sequenced (7/34) were confirmed as *H. pylori*. Real time PCR is able to enhance the positivity rate in detecting *H. pylori* directly from the specimen. Furthermore, rPCR was specific, sensitive, less time consuming and more cost effective than histopathology examinations.

Biography

Mardiasuti has completed his MSc in Microbiology from Western Illinois University in 1991 and PhD in Medical Education from Gadjah Mada University in 2013. She is the Director of Postgraduate training program of Clinical Microbiology, Faculty of Medicine, University of Indonesia. She is also the Research Coordinator at Department of Medical Education at the same institution.

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