ABSTRACT

Detection of *Mycobacterium leprae* Using Polymerase Chain Reaction (PCR) Technique from the Nasal Swab and Skin Lesion Section Specimens in the New Leprosy Patients

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The objective of this study was to determine appropriate location to obtain specimens for microbiological laboratory diagnosis in new leprosy patients by comparing results of *M. leprae* detection using PCR technique in specimens with nasal mucosa swab to those taken with skin lesion section.

This was a laboratory observasional study, in which the samples were new leprosy patients admitted at the Division of Morbus Hansen, Outpatient Clinic, Dr. Soetomo Hospital Surabaya, who met the inclusion criteria. Samples, consisting of 40 patients were taken by means total sampling. The patients were divided into two groups namely Multibasilar (MB) and Pausibasilar (PB) by virtue of clinical diagnosis with criteria WHO 1988. From those patients, specimens were obtained using nasal mucosa swab and skin lesion section, and the detection of *M. leprae* was undertaken by means of AFB staining methode (Ziehl Neelsen) and Nested PCR that amplified a 587-bp outer product and 347-bp inner product from *M. leprae groEL* (65 kD antigen) gene. Chi Square statistical test was employed to test the difference between the result of detection of *M. leprae* bacilli using nasal mucosa swab and skin lesion incision, and the result of detection of *M. leprae* using AFB staining and PCR methode.

The result indicated that (1) no significant difference ($p = 0,204$) in the result of *M. leprae* detection using PCR between specimens obtained from nasal mucosa swab and skin lesion incision, (2) there was a significant difference in the result of *M. leprae* detection between AFB staining and PCR methode in spesimens obtained from nasal mucosa swab ($p = 0,017$) and skin lesion incision ($p = 0,000$), which the PCR gave higher positive result than AFB staining methode.

Keywords : *M .leprae*, location, specimens, PCR, new leprosy patient.