



INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

COMPARISON OF SERUM LL-37 LEVELS IN PAUCIBACILLARY AND MULTIBACILLARY MORBUS HANSEN PATIENTS

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Introduction: Morbus Hansen (MH) is a chronic disease caused by *Mycobacterium leprae*. Diagnosis finding were difficult due to several factors, therefore leads to late management and causing significant disability. Factors that effect clinical spectrum of morbus hansen were being influenced by cell-mediated-immunity by role of antimicrobial peptide, among them was LL-37 which has function to kill bacteria and took part in innate immunity.

Objective: The purpose of this study was to determine differences in levels of LL-37 serum type PB (Paucibacillary) and MB (Multibacillary) in Regional General Hospital dr. Saiful Anwar Malang and Kediri Leprosy Hospital. The ethics committee of Regional General Hospital dr. Saiful Anwar Malang was approved this study.

Materials and methods: Cross sectional approach with comparative analysis method was used in this study. Samples were taken using consecutive sampling method. Serum LL-37 levels were taken from venous blood and being measured using ELISA kit.

Results: The mean serum level of LL-37 in PB type was $94.15\text{ng/ml} \pm 79.92$ with the lowest level 43.43ng/ml and the highest 260.63ng/ml . The mean serum level of LL-37 in MB type was $32.73\text{ng/ml} \pm 14.58\text{ng/ml}$ with the lowest level of 5.71ng/ml and the highest level of 43.86ng/ml . Mann-Whitney test results showed significant values ($p < 0.05$), accordingly there was a statistically significant difference in serum levels of LL-37 between PB and MB types.

Conclusions: LL-37 serum levels of MB type MH patients were lower than PB type. The difference in levels of LL-37 between PB and MB could be used as parameters in order to know the cellular immunity status of MH patients and as an indicator of chronic disease that currently present.

Keywords: Morbus hansen, multibacillary, paucibacillary, serum LL-37 levels

