Identification Of Mycobacterium Tuberculosis Gene Mutation That Caused Rifampicin Resistance In Mdr Tb Patients In H. Adam Malik Medan, North Sumatera, Indonesia

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Background and Aim : TB is an infectious disease that ranks second in death (1.5 million cases) in the world. Indonesia is currently a country with a high burden of drug resistant TB in the world, especially MDR-TB. This study aims to determine mutations in the gene that M. tuberculosis cause resistance to rifampicin in the Haji Adam Malik General Hospital, Medan, determine which codons are mutated in the rpoB gene.

Methods This study was a observational study conducted from July-November 2019 on 30 MDR-TB patients. Samples taken from the sputum of patients with results GeneXpert positive MTB were resistant. Identification of rpoB M.tuberculosis gene mutation was done by using Muliplex Polymerase Chain Reaction technique.

Results : 30 MDR-TB patients founds, 18 (60%) male and 12 female. The largest age of MDR-TB patients, 41-50 years (30%). Most patient education status, Senior high school 13 (43.34%) The highest percentage of previous medical treatment centers were 14, (46.67%) patients. Most marital status of patients, 25 (83.33%) people were married. A history of comorbidity was found in DM in 16 (53.33%) patients. The highest percentage of MDR-TB suspicion criteria is recurrence / new cases, 16 (53.33%) patients. The highest percentage of 81 bp rpob M.tuberculosis gene mutations was found in codon 511,513,518,522,526,531,533 (100%) & 516 (90%) while the smallest mutation was in codon 507 (43.33%).

Keywords: Multi Drug Resistant TB, Rifampicin, rpoB, PCR

Biography:

Rahmat Aditya is Resident of Pulmonology and Respiratory Medicine in Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia. The high number of TB cases in Indonesia made him interested in conducting research on TB, especially drug resistant TB

Speaker Publications:

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