INTRODUCTION

Tuberculosis (TB) still world’s and Indonesia problem. Approximately one third of the world population ever infected with Mycobacterium tuberculosis (Mtbc), but only about 10% become pulmonary TB. Presumably there is influence of individual genetic factors to TB infection. Mannose binding lectin (MBL) is an acute phase protein in a non specific immune system response which will bind Mtbc and activate complement system to destroy the pathogen. Polymorphisms in exon 1 codon 52 and 54 might have correlation with decreasing of MBL protein in plasma and influence to opsonin function. 1-3.

METHOD

The design of study was observational case control study. Pulmonary tuberculosis patients as case group were matched with healthy person group with tuberculin positive test as control group. The aims of the study was to determine the effect
of exon 1 MBL gene polymorphisms codon 52 and 54 on incidence of pulmonary TB in South Sumatera Indonesia. Polymorphism of codon 52 and 54 were detected by PCR-RFLP using BanI enzyme and HhaI enzyme respectively.

RESULT AND DISCUSSION

We recruited 40 cases and 40 controls subject. The genotype distribution of codon 52 MBL gene were 55% allele A (wild type) and 45 allele D (mutant) in cases group, and 40% and 60% in control group respectively. Value of p 0,179, Odds Ratio 0,54 in confidence interval 95%. The genotype distribution of codon 54 MBL gene were 75% allele A (wild type) and 25 allele B (mutant) in cases group, and 65% and 35% in control group respectively. Value of p 0,329, Odds Ratio 0,61 in confidence interval 95%. These finding indicated no effect of exon 1 MBL gene polymorphisms codon 52 and 54 to incidence of tuberculosis.

CONCLUSION

Exon 1 MBL gene polymorphisms codon 52 and 54 have no effect on incidence of pulmonary TB in South Sumatera Indonesia.
REFERENCES


