

Abstract

## **COMPARISON OF SERUM NEOPTERIN LEVELS IN PATIENTS NEW CASES OF PULMONARY TB AFB POSITIVE AND INACTIVE CASE OF PULMONARY TB**

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### **Background**

Tuberculosis ( TB ) is a disease which has long been known and is still a cause of death in the world . The prevalence of TB in Indonesia and other developing countries is quite high . Currently required new diagnostic techniques , which can diagnose TB more quickly , accurately , and can also help the clinician to establish whether the patient active TB or not the former TB cases . Neopterin as a biomarker produced by macrophages activated by infection with *Mycobacterium tuberculosis* can be used as additional diagnostic and therapeutic monitoring as well as assessing the activation of macrophages.

The purpose of this study was to determine the serum neopterin levels in patients with new smear positive pulmonary TB is higher than in active case of TB .

### **Methods**

This research is a type of analytic cross-sectional study design conducted in lung poly , poly DOTS and inpatient in hospital Dr Soetomo 2014. Subjects were new cases of pulmonary TB patients with smear positive and former cases of pulmonary TB patients who meet the inclusion and exclusion criteria. A total of 50 patients of which 25 new cases of pulmonary TB patients with smear positive and 25 in active patients of pulmonary tuberculosis cases .

### **Result**

The results of this study indicate that patients with pulmonary TB of new smear positive cases had serum neopterin levels were significantly higher with ap value of  $0.000 < 0.05$  rather than in active patients of pulmonary tuberculosis. Then there is also a significant correlation  $p < 0.05$  , ie the positive sputum smear , the levels of serum neopterin pulmonary TB patients new cases with smear positive higher .

### **Conclusion**

Serum neopterin levels in patients pulmonary tuberculosis new cases with smear positive was higher than inactive cases of pulmonary tuberculosis .

**Key Word** : New cases of pulmonary TB smear positive, inactive pulmonary tuberculosis, neopterin serum.