

## ABSTRACT

Tuberculosis (TB) is any infectious disease in humans and animals caused by *Mycobacterium* species. TB infection resulting in decreased food intake and malabsorption of nutrients and metabolic changes in the body resulting in a decrease in muscle mass and fat (wasting) as the mechanism of protein energy malnutrition. Increased production of IFN- $\gamma$  and IL-6, TNF- $\alpha$  will inhibit the activity of the enzyme lipoprotein lipase (LPL) fat tissue. LPL enzyme plays a role in the process of clearance of triglycerides. This enzyme elevations increase the clearance of triglycerides thereby reducing the synthesis of fat and increasing the process of lipolysis in fat tissue. This study aimed to compare the levels of TNF- $\alpha$  and triglycerides in patients with TB BTA (+) new and post-intensive phase of treatment. This research is conducting comparative tests. Data processing techniques were analyzed using non-parametric tests; -sampel paired Wilcoxon test. Relationship TNF  $\alpha$  and triglycerides in patients with pulmonary TB BTA (+) and patients with post-intensive phase of treatment r test with Pearson product moment. The results showed levels of TNF alpha TB patients BTA (+) with the post-treatment levels of TNF alpha intensive phase by using the Wilcoxon test in getting the value of  $p = 0.031$  ( $p < 0.05$ ). The results showed no difference in triglyceride levels of patients TB BTA (+) classification of new patients and post-intensive phase of treatment in December 2015 by using the Wilcoxon test in getting the value of  $p = 0.254$  ( $p > 0.05$ ). Relations triglycerides in patients with TB BTA (+) classification of new patients in December 2015 the results obtained with the Spearman correlation statistical value of  $p = 0.302$  ( $p > 0.05$ ) means that there is no relationship / correlation between triglycerides with levels of TNF alpha in patients with newly. Relations triglycerides in patients with TB BTA ( + ) patient classification intensive phase in December 2015 the results obtained with the Spearman correlation statistical value of  $p = 0.032$  (  $p < 0.05$  ) means that there is a relationship / correlation between triglycerides with levels of TNF alpha in patients with post intensive phase of treatment . The value of the correlation coefficient  $r = 0.392$  indicates the direction of a positive relationship means that the rising levels of triglycerides then the rising levels of TNF alpha in patients with post -intensive phase of treatment.

**Keyword :** *tuberculosis, TNF- $\alpha$ , triglycerida*