

ABSTRACT

TB is determined as one of the worlds's deadliest infectious diseases. The infection could attack many sites of human body, mainly in the respiratory system. Incidency of TB infection in Indonesia belong to the top 5 around the world with health financial expenditures around 127 USD. A strong diagnostic tool will help to eliminate TB infection, because the disease will be treated correctly. Smear microscopy is one of the main TB diagnostic tools in lack culture labortaory such as many primary health care in Indonesia. However, the sensitivity of the TB smear microscopy is very low. This study is aimed to assess the diagnostic capability of 2% bleach as preprocessing steps in TB smear microscopy. This study is continuation of the preliminary study in developing a new added method for ZN smear in TB diagnostic. The diagnostics values needs to be assessed before using the bleach method in real clinical setting. The sample from 30 sputum of subjects suspected as pulmonary TB infection. All the subjects are came from primary health care that sends to the microbiology laboratory of FMUI. The method includes a short period of sputum incubation in bleach, and concentrated step before processing to ZN conventional smear. The sensitivity of the bleach is higher as 1, and area under the curve (AUC) is also 1. However, the specificity is only about 0.22 compare to direct ZN and the positive likelihood ratio is only 1,28. Bleach can make the smear background become clearer and bacilli easier to be counted, then can make the diagnostic values higher. The bleach use from household bleach as inexpensive and safer solution for laboratory workers as bleach is a strong decontaminant.

Keywords : Bleach, smear microscopy, TB diagnostic