strongly recommended using this simple, cheap easy to use, test at least every 9 months in all health care workers.

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59.005
Predictive value and cut off point of PPD in probable patients with pulmonary tuberculosis
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Background: Tuberculin skin testing (TST) is used for identification of tuberculosis infection. Interpretation of test is related to many factors such as prevalence of disease in community, use of vaccine, age of patients and exposure to non-tuberculous mycobacteria. Cut off point of TST is reported between 2 to 16 mm in different communities. In this study we aimed to determine the predictive value and cut off point of TST in probable patients with pulmonary tuberculosis (TB).

Methods: A total of 714 probable patients with pulmonary tuberculosis with mean age 57 ± 20.11 years were included in this study. 52.9% of them were male. All subjects were tested using 5 tuberculin units of purified protein derivative (PPD). Gold standard for diagnosis of TB was considered positive smear or culture. Specificity, sensitivity, positive predictive value (PPV) and negative predictive value (NPV) of TST were determined. Cut off point of PPD was determined using Roc curve.

Results: 113 patients from 714 suspicious subjects (15.82%) had pulmonary tuberculosis. 80% of them had positive sputum smear. Sensitivity, specificity, PPV and NPV for PPD > 5 mm were 80%, 61%, 28% and 94% respectively. Sensitivity, specificity, PPV and NPV for PPD > 10 mm were 53%, 82%, 35% and 90% respectively. The calculated cut off point for PPD was > = 4 mm.

Conclusion: Our results showed that a TST reaction smaller than 5 mm was seen in patients with bacteriological confirmed pulmonary tuberculosis. Predictably, as the cut-off is moved to larger reactions, sensitivity decreases and specificity increases. More estimates are needed to identify the accurate cut off point of PPD in tuberculosis patients.

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Challenges in the case detection of sputum smear-positive tuberculosis in Rwanda: A lowresource setting
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Background: The use of smear microscopy in patients suspected of tuberculosis presenting to health services is of great value in case detection and in reducing the spread of the infection throughout the population by treatment of such cases. The TB diagnosis using Smear microscopy places a burden on the patient. A patient with suspected TB typically has to visit the clinic at least twice before a diagnosis can be made, and then has to return again for the results. In the present study, we aimed to evaluate the performance of the sputum smear microscopy and its public implication with reference to recommendations for the number of specimen that have to be collected from TB suspect.

Methods: This study was conducted at the department of microbiology, University of Butare Teaching Hospital after obtaining clearance from the ethical committee. In this study, using TB register and laboratory sputum register, we review laboratory records of seven hundred and forty six patients who were TB suspect during the period from January 2007 to December 2008. Data processing and statistical analysis were performed using SPSS software (Windows version 16.0). The results were expressed as percentage, with significance at 5%.

Results: During the study period, 741 new TB suspects submitted sputum specimens for AFB smear. Among the suspects, 46% (341) of patients submitted sputum specimens in accordance with the guidelines (i.e., three sputum samples), 14.3% (106 of 741) had two sputa submitted for AFB smear and 39.7% (294 of 741) submitted only one sputum specimen. Of the 39.7% of TB suspects who did not show up after submitting the first on-spot specimen, 6.5% (19) had a smear-positive first. Of 341 patients submitting three sputum samples, 55 (16.1%) suspects were found to have at least one positive smear. Of these, 47 (85.5%) were detected from the first specimen and 8 (14.5%) were positive on the second specimen but not the first. The third specimen did not have any additional diagnostic value for the detection of AFB as shown in Fig. 2.

Conclusion: In conclusion, our result show that examining two sputa smears was sufficient for the detection of AFB in our laboratory. Further research involving different laboratories from all of the regions of Rwanda is needed to reassess these findings.

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