

Improving diagnostic of pulmonary tuberculosis in hiv patients by bronchoscopy: a cross sectional study/Prayudi Santoso, Arto Y. Soeroto, Rianita Juniati, yovita Hartantri, Rudi wsaksana, Bacht Alissjabana, Heda M. Nataprawira, Ida Parwati.

Prayudi Santoso, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20470652&lokasi=lokal>

Abstrak

ABSTRAK

Background: diagnostic of pulmonary TB in HIV patients is a problem due to non specific clinical features, or radiological appearance. HIV patients with CD4<200 cells/mL infected with M. tuberculosis have less capacity in containing M. tuberculosis, developing granulomas, caseous necrosis, or cavities. This condition is caused by weakend inflammatory which later reduced sputum production and may cause false negative result. This study aimed to assess differences in the positivity level of acid fast bacilli (AFB) and cultures of M. tuberculosis from non-bronchoscopic sputum (spontaneous and induced sputum) compared to bronchoscopic sputum (bronchoalveolar lavage) in HIV positive patients suspected pulmonary tuberculosis with CD4<200 cells/mL.

Methods: this cross sectional study was conducted in adult HIV patients treated in Hasan Sadikin Hospital with CD4<200 cells/mL suspected with pulmonary tuberculosis by using paired comparative analytic test. All patients expelled sputum spontaneously or with sputum induction on the first day. On the next day, bronchoalveolar lavage (BAL) was performed. The two samples obtained from two methods were examined by AFB examination with staining Ziehl Neelsen (ZN) and cultured of M. tuberculosis on solid media Ogawa on all patients. Positivity, sensitivity and increased sensitivity of AFB and culture of M. tuberculosis in the non bronchoscopic and bronchoscopic groups were compared.

Results: there were differences in the positivity level of AFB with ZN staining between non-bronchoscopic and bronchoscopic groups which were 7/40 (17.5%) vs 20/40 (50.0%) (p<0.001). The differences between the cultures of non-bronchoscopic and bronchoscopic groups were 16/40 (40.0%) vs 23/40 (57.5%) (p=0.039). Bronchoscopic sputum increased the positivity level of the ZN AFB examination by 32.5% (from 17.5% to 50.0%) as well as on culture examination by 17.5% (from 40.0% to 57.5%).

Conclusion: Bronchoalveolar lavage can improve the positivity level of smears and cultures in patients suspected of pulmonary TB in HIV patients with CD4<200 cells/mL.