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Title: TB-PCR test of EBUS-TBNA samples in differentiating mediastinal lymphonode tuberculosis and sarcoidosis

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Body: Introduction and background: Transbronchial needle aspiration (TBNA) guided by endobronchial ultrasonography (EBUS) is a diagnostic method which may be used in diagnosing benign granulomatous diseases in contemporary practice. Cytological, microbiologic and tuberculosis (TB)-polimerase chain reaction (PCR) results in samples play an important role in the differential diagnosis of lymphonode tuberculosis and sarcoidosis. However, the diagnostic value of TB-PCR has not been well analyzed. Aims and objectives: To determine how well TB-PCR test would distinguish mediastinal lymphonode tuberculosis and sarcoidosis in a country endemic for tuberculosis. Methods: Consecutive patients with diagnoses of mediastinal lymphonode tuberculosis and sarcoidosis were enrolled, and the diagnoses confirmed by follow up. DNA was extracted from TBNA samples and subjected to TB-PCR. Results: 22 of 25 patients with mediastinal lymphonode tuberculosis and 2 of 34 patients with sarcoidosis tested positive by TB-PCR. The sensitivity, specificity, positive predictive and negative predictive values for TB-PCR in distinguishing tuberculosis from sarcoidosis were 0.88 (95% confidence interval 0.75–0.99), 0.91 (0.81–0.99), 0.88 (0.75–0.96) and 0.91 (0.79–0.98), respectively. A combination of TB-PCR with acid-fast staining of samples identified 23 of 25 (96.2%) of patients with mediastinal lymphonode tuberculosis, with sensitivity, specificity, positive predictive and negative predictive values (95% CI) of 0.92 (0.78–0.99), 0.91 (0.79–0.96), 0.88 (0.63–0.93) and 0.94 (0.86–0.99), respectively. Conclusions: TB-PCR is a good screening test to distinguish mediastinal lymphonode tuberculosis from sarcoidosis.