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Title: EBUS-TBNA for diagnosis of granulomatous mediastinal lymphadenopathy

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Body: Methods: Retrospective review of all patients who underwent EBUS-TBNA for suspected granulomatous mediastinal lymphadenopathy at Singapore General Hospital between 2008 and 2011. Results: Over 3 years 33/371 (9%) patients underwent EBUS-TBNA for suspected granulomatous mediastinal lymphadenopathy – 18 for tuberculous (TB) and non-tuberculous mycobacterial (NTM) lymphadenitis, 15 for sarcoidosis. Mean age 47±18 years, 54.5% male. Total of 49 lymph node stations were sampled, with station 7 the most frequent (43%). Median size of lymph node was 17mm (8-30), median number of passes per lymph node 2 (1-5), and core biopsy obtained in 45 (92%). Median follow-up was 9 months (0.5-26). 13/18 patients had TB/NTM and EBUS-TBNA was diagnostic in 9. EBUS-TBNA cultures were positive in 6 (67%), 1 showed acid-fast bacilli but cultures were negative, 2 had necrotizing granulomatous inflammation from biopsies and sputum cultures grew TB. Of the 4 false negatives, mediastinoscopy in 1 patient found NTM, 1 patient's bronchial washings grew TB, and 2 patients responded to TB treatment. 14/15 patients had sarcoidosis and EBUS-TBNA was diagnostic in 9 with non-caseating granulomatous inflammation on histology. Of the 5 false negatives, 1 patient had a transbronchial lung biopsy consistent with sarcoidosis, the other 4 were diagnosed based on clinical history, response to treatment and follow-up. Sensitivities of EBUS-TBNA for TB/NTM, sarcoidosis and overall granulomatous mediastinal lymphadenopathy were 69%, 64%, 64%, NPV were 56%, 17%, 33%, and accuracies were 78%, 67%, 70% respectively. Conclusion: EBUS-TBNA can be useful in the diagnosis of suspected granulomatous mediastinal lymphadenopathy with a sensitivity and accuracy of >60%.