Use of Endobronchial Ultrasound-guided Transbronchial Needle Aspiration (EBUS-TBNA) in the Diagnosis of Granulomatous Mediastinal Lymphadenopathy

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Abstract

Introduction: This study assessed the clinical utility of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) for the diagnosis of suspected granulomatous mediastinal lymphadenopathy. Materials and Methods: Retrospective chart review of all patients who underwent EBUS-TBNA for suspected granulomatous mediastinal lymphadenopathy at Singapore General Hospital between December 2008 and December 2011 inclusive. Results: Over a period of 3 years, a total of 371 patients underwent EBUS-TBNA of whom 33 (9%) had the procedure performed for evaluation of suspected granulomatous mediastinal lymphadenopathy — 18 for suspected tuberculosis (TB) and non-tuberculous mycobacterial (NTM) lymphadenitis, and 15 for suspected sarcoidosis. EBUS-TBNA was diagnostic in 9 of the 13 patients with a final diagnosis of TB/NTM. EBUS-TBNA cultures were positive in 6 of them (46%), 1 showed acid-fast bacilli (AFB) although cultures were negative, and 2 had necrotising granulomatous inflammation from EBUS-TBNA biopsies and sputum cultures grew TB. EBUS-TBNA was diagnostic in 9 of the 14 patients with a final diagnosis of sarcoidosis through histology showing non-caseating granulomatous inflammation. The sensitivities of EBUS-TBNA for diagnosis of TB/NTM, sarcoidosis and overall granulomatous mediastinal lymphadenopathy were 69%, 64%, 64%; the negative predictive values 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 sensitivities and accuracies of >60%.

Key words: Lymphadenitis, Non-tuberculous mycobacterial, Sarcoidosis, Tuberculosis

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