



Service Priorities and Programmes
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Endobronchial ultrasound-guided transbronchial needle aspiration: QEH experience

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Introduction

Most lung cancers are in locally advanced or metastatic stages upon diagnosis and proper staging is critical in assessment of operability. Mediastinal lymph node staging remains one of the most important factors determining the overall staging in the absence of distant metastasis. Traditionally, tissue sampling of mediastinal lymph node could only be performed by surgery such as mediastinoscopy. However it is invasive, costly and involves general anesthesia. Most patients with advanced lung cancer are not good candidate for general anesthesia. As such, the novel technique of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) had recently been developed. EBUS-TBNA had been shown to be a highly accurate and safe procedure for diagnosis and staging in patients with confirmed or suspected lung cancer. The procedure can be incorporated with conventional bronchoscopy in a single endoscopy session under local anesthesia and conscious sedation.

Objectives

Prospective case series to investigate the diagnostic performance and safety of EBUS-TBNA in Queen Elizabeth Hospital.

Methodology

Consecutive patients presented with mediastinal or hilar abnormalities with suspected mediastinal lymph node metastasis underwent EBUS-TBNA between January 2011 and September 2012 were recruited and followed up

Result

A total of 58 EBUS-TBNA procedures were performed in 57 patients (M: F= 43:14, mean age=62, range= 28-84). Seventy-nine lymph node stations (67 mediastinal and 12 hilar lymph nodes) and four para-tracheal masses were targeted for tissue sampling with average of 4.1 needle passes per site. Thirty-five patients with lung cancer (85.4% of all lung cancer patients) were accurately staged by EBUS-TBNA. The procedure diagnosed 31 cases of mediastinal metastasis from carcinoma of lung, 4 cases of metastasis from extrathoracic malignancy and 6 cases of tuberculosis (11 true negative cases). The overall diagnostic accuracy was 89.7%. Regarding diagnosing malignancy, the sensitivity, specificity and negative predictive value were 85.4%, 100% and 64.7% respectively. Only two patients (3.4%) had significant

desaturation during the procedure and there are no major procedure-related complications. Conclusion: EBUS-TBNA is a safe, promising and accurate diagnostic modality for patients with suspected mediastinal metastasis. The procedure should be considered for evaluation of the mediastinum during the staging process of lung cancer.