Use Of Endobronchial Ultrasound-guided Transbronchial Needle Aspiration In The Diagnosis Of Mediastinal Lesions

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BACKGROUND

Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is a minimally invasive procedure that has been demonstrated to have good diagnostic yield in the diagnosis of mediastinal lesions. The current study was conducted to investigate the use of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) in the diagnosis of mediastinal lymphadenopathy.

METHODS

A total of 199 patients submitted to EBUS-TBNA at a private hospital from June 2013 to December 2019 were included in this retrospective cross-sectional study. All accessible mediastinal and hilar lymph nodes were systematically explored and punctured using EBUS-TBNA. Material analysis included cytological smear and cytopathological analysis of paraffin-embedded cell blocks. If EBUS-TBNA did not result in a formal pathological diagnosis, patients were subsequently referred for image follow up or other surgical diagnostic procedure.

RESULTS

Table 1. Data from the 199 patients who underwent EBUS-TBNA and the 391 biopsied lymph nodes.

Patients	N=199
Age; mean (SD)	61.4 (5.9)
Male; n (%)	112 (56.3)
EBUS-TBNA indications; n (%)	
Mediastinal staging for lung cancer	109 (54.8)
Mediastinal staging for other types of cancer	44 (22.1)
Mediastinal lymphadenopathy	32 (16.1)
Mediastinal lymphoma	12 (6.1)
Biopsied lymph nodes	**N=391**
Representative samples; n (%)	361 (92.3)
Malignant lesions; n (%)	134 (34.3)
Benign lesions; n (%)	141 (36.1)

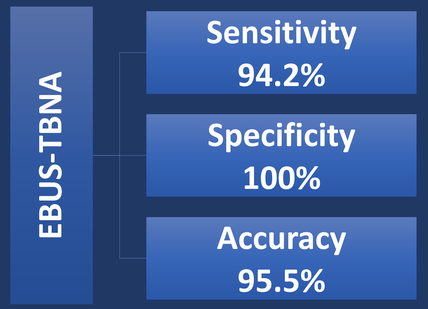


Figure 1: Sensitivity, specificity and accuracy of EBUS-TBNA

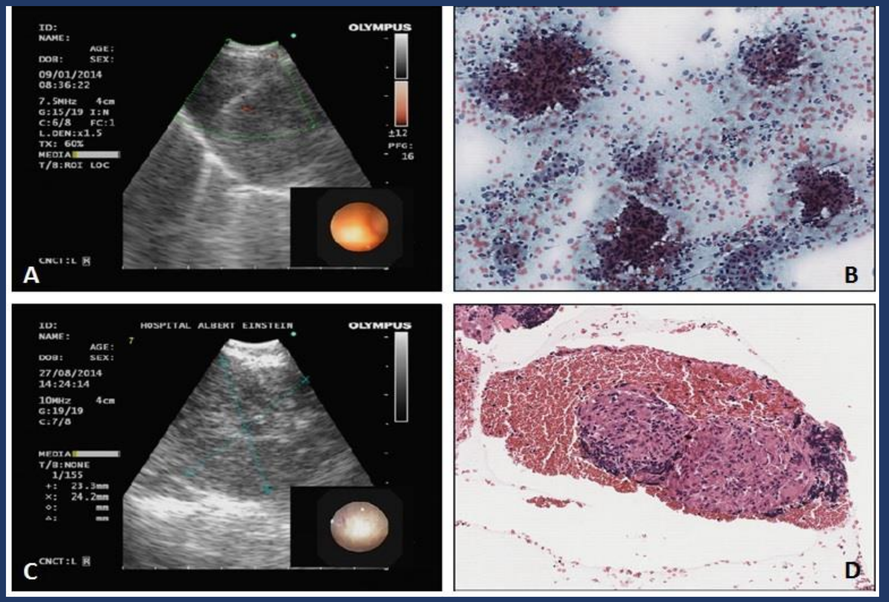


Figure 2: A) Puncture of lymph nodes by EBUS-TBNA; B) Cytological smears show clusters of atypical epithelial cells in mid-lymphoid fundus; C) Heterogeneous lymph node observed by EBUS; D) Cell block showing histiocyte aggregates sketching granulomas.

CONCLUSIONS

EBUS-TBNA can systematically evaluate the status of mediastinal lesions and improve the accuracy of preoperative lymph node staging, being an excellent option for diagnostic approach.

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