

DIAGNOSTIC YIELD OF EBUS-TBNA FOR MEDIASTINAL LYMPH NODE AND MASSES ASSESSMENT. RESULTS FROM 472 PATIENTS.Top Author: **Samy LACHKAR***Pneumology, Rouen university Hospital
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Introduction : Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is a safe mini-invasive procedure for the assessment of mediastinal lymph nodes and masses. The aim of this study was to assess the diagnostic yield of EBUS-TBNA in two French institutions.

Methods : 472 consecutive patients undergoing EBUS-TBNA between August 2006 and May 2013 were retrospectively included. Clinical and cytological data were reviewed. Factors associated with higher diagnostic yield were assessed by univariate analysis.

Results : EBUS-TBNA was performed for the aetiological diagnosis of lymph nodes (53,6%), for lung cancer staging (12,3%), for the diagnosis and staging of a thoracic (9,1%) or extra-thoracic (1,9%) malignancy, for the diagnosis of the relapse of a thoracic (12,9%) or extra-thoracic (10%) malignancy, or to obtain material for molecular analysis (0,2%). 1.81 ± 0.97 (mean $\pm$ SD) nodal stations were assessed, with a mean number of needle aspiration of 4.2 ± 1.2 (mean $\pm$ SD).

EBUS-TBNA procedures were achieved under local anaesthesia (6%), deep sedation (61%) or general anaesthesia (33%). Specimen aspiration was suitable for cell block processing in 275 procedures (60%).

Cytological analysis was informative in 95% of the procedures, including 290 malignancies and 160 normal or benign lymph nodes (including 44 sarcoidosis and 3 tuberculosis). The diagnostic yield was higher in malignancies (314/323 vs. 136/149; $p=0.008$, Chi2 Test), larger lymph nodes ($16,32 \pm 6,87$ mm ; $p=0.006$), when cell block was available (272/275 vs. 173/192; $p<0.001$, Chi2 Test), when a higher number of punctures were performed (3 or more punctures vs. < 3 punctures ; $p<0.001$, Chi2 Test) and in procedures under deep sedation or general anaesthesia vs. local anaesthesia (426/442 vs. 23/29; $p<0.001$, Chi2 Test).

EBUS-TBNA sensitivity and specificity were 94% and 99% respectively. Positive and negative predictive values were 100% and 81% respectively. When EBUS-TBNA was performed for lymph node staging in lung cancer , c-TNM were confirmed in 50% cases, upstaging occurred in 4% and downstaging in 46%. A surgical procedure was avoided for 83% patients, and mediastinoscopy was avoided for 63% patients undergoing EBUS-TBNA for mediastinal staging.

Conclusion : EBUS-TBNA is a reliable procedure with a high diagnostic accuracy for the assessment of mediastinal lymph nodes and masses.