

DIAGNOSTIC VALUE OF ASPERGILLUS GALACTOMANNAN ANTIGEN FROM EBUS GUIDED BAL FLUID FOR DIAGNOSIS PULMONARY ASPERGILLOSIS

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Background:

Invasive Pulmonary Aspergillosis (IPA) is a frequent and increasing cause of morbidity and mortality in immunocompromised patients. To improve the outcome of these often fatal infections, early diagnosis of IPA is of utmost importance. The primary aim of this study was to establish the diagnostic value of Aspergillus galactomannan antigen assay from endobronchial ultrasonography (EBUS) guided bronchoalveolar lavage (BAL) fluid for diagnosis of IPA

Design:

Retrospective analysis.

Methods:

The diagnostic yields of EBUS for patients with suspicion of pulmonary aspergillus between December 2008 and March 2013 were analyzed.

Results:

A total of 106 patients with suspicion of pulmonary aspergillus were enrolled in the study. The mean age was 52.9 ± 17.1 years old and the most underlying disease was hematological malignancy (n=36, 34%). Among these patients, 29 patients were diagnosed as proven aspergillosis and 6 patients as possible aspergillosis. At a cut-off index value of 0.5, GM detection in BALF had a sensitivity of 97.14% and specificity of 78.57%. PPV and NPV were 69.39% and 98.21%. Applying a cut-off index of 1.0 as is proposed in adults resulted in a sensitivity, specificity, PPV and NPV of respectively 96.97%, 95.89%, 91.43% and 98.59%.

Conclusion: Aspergillus galactomannan antigen assay from EBUS guided BAL fluid is a useful diagnostic tool for pulmonary aspergillus. It offered a high sensitivity, specificity, positive predictive value and negative predictive value at a cut-off index value of 1.0. This technique can be particular helpful in immunocompromised patients who suspicion of pulmonary aspergillus to avoid delay treatment.