



Bronchoalveolar Lavage Cellular Analysis in Conjunction with Hrcr Chest Imaging As a Diagnostic Intervention for Patients with Suspected Ild.

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I. INTRODUCTION

Bronchoalveolar lavage (BAL) has gained acceptance for diagnosis of Interstitial lung disease (ILD). The advent of high-resolution computed tomography (HRCT) has reduced the clinical utility of BAL. This work has utilized the recommendations of the American Thoracic Society (ATS) to optimize BAL and the findings have been associated with clinical examination and HRCT to precisely narrow down the cause of ILD.

II. PATIENTS AND METHODS:

Fifty patients suspected ILD were recruited in this study after obtaining their consent. The present study was a prospective observational

study done on patients visiting Govt chest diseases and tuberculosis Hospital, Warangal during the time period of December 2018 to July 2020. BAL was performed on ILD suspects at the target site chosen based on HRCT. The procedure, transport, processing, and analysis of BAL fluid were performed as per the ATS guidelines.

III. RESULTS:

The segregation of the cohort as per the clinical diagnosis is as follows: Idiopathic pulmonary fibrosis (10), CTD-ILD (18) and Hypersensitivity pneumonitis (22). The demographic data and the findings are listed in the below table

Diagnosis	Mean age at diagnosis	Male %	Female %	Mean Duration of symptoms	Mean BAL Total cell count	Alveolar macrophages %	Lymphocytes %	Neutrophils %
IPF	60	40	60	1.7 years	145	60	18	22
CTD-ILD	43	22	78	1.2 years	202	40	41	19
HP	52	55	45	0.6 years	232	43	55	7

IV. CONCLUSION:

- BAL has an adjuvant role and increases the diagnostic yield in certain ILDs such as Hypersensitivity pneumonitis and CTD-ILD.
- Recognition of a predominantly inflammatory cellular pattern (increased lymphocytes, neutrophils and eosinophils) in the BAL differential cell profile frequently helps the clinician narrow the differential diagnosis of ILD, even though such patterns are nonspecific.
- BAL cellular analysis may be a useful adjuvant in the diagnostic evaluation of individuals who lack a confident UIP pattern on HRCT imaging of the thorax.
- BAL along with clinical and HRCT findings improved the diagnostic accuracy by incorporating the acute or chronic nature of the disease and the cause for acute exacerbation, which helped in the better management of ILDs.



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