Response to bronchoalveolar lavage and high-resolution computed tomography in interstitial lung disease

Thanks for the interest shown in our article titled “Bronchoalveolar lavage cellular analyses in conjunction with high-resolution computed tomography imaging as a diagnostic intervention for patients with suspected interstitial lung diseases.”[1] Find below the response to the queries raised:

1. The study has been based on ATS guidelines, which recommend bronchoalveolar lavage (BAL) cellular analysis for supporting the diagnosis of a specific interstitial lung diseases (ILDs) and narrowing down the differential diagnosis. Authors have not only followed the guidelines correctly but also have misinterpreted them. They have classified ILD’s such as idiopathic pulmonary fibrosis (IPF), chronic hypersensitivity pneumonitis into acute, subacute with superimposed infection based on a cellular analysis which needs to be clarified. The usage of terms such as “acute IPF,” “subacute IPF with bronchitis,” “chronic hypersensitivity pneumonitis with allergic bronchitis,” “bilateral subacute rheumatoid arthritis induced ILD” in conjunction with BAL findings again requires clarification from authors.

Response: Documenting the diagnosis of a disease should not only help in its identification but also in its management. In our work, we utilized the ATS guidelines[2] to narrow down and refine the diagnosis to improve the management strategy. The acute, subacute, bronchitis, allergy, and infection terminologies were used based on the differential cell count of neutrophils, lymphocytes, and eosinophils as per the guidelines of ATS [Table IIb]. Further, based on Table 1 (IIa), if the neutrophil count amounted to greater or less than 50% we added acute or subacute sub types. The final diagnosis of “bilateral, acute IPF with bronchitis, and probable infection” was a collective decision of our clinical, radiological, and BAL findings (bilateral – clinical and radiological test; acute – BAL neutrophil count; IPF – radiological and BAL neutrophil count; bronchitis – BAL neutrophil count and radiological test; probable infection – BAL neutrophil count).

2. In results, authors have classified ILD’s based on clinical findings. They have included the entity named as “aspiration bronchiolitis,” which needs to be clarified.

Response: The patient had psychiatric illness with repeated history of aspiration pneumonia. The high-resolution computed tomography (HRCT) showed bilateral lower lobular nodules and interstitial septal thickening. The diagnosis of aspiration bronchiolitis was made based on clinical history, HRCT, and BAL findings. Pathologists use the term diffuse panbronchiolitis for bronchiolitis secondary to oropharyngeal aspiration. Since the condition is included in the classification of ILDs, this patient was included in the study.

3. In results, the percentage variability is too high which loses significance in view of small sample size.

Response: As BAL is an invasive procedure small sample size for this study is justifiable. Small sample size may not be the only cause for higher variability in cell counts; we need to understand that it could also be due to inter- and intra-disease severity pattern among patients.

REFERENCE

1. Chockalingam A, Duraiswamy R, Jagadeesan M. Bronchoalveolar lavage cellular analyses in conjunction with high-resolution computed tomography imaging as a diagnostic intervention for patients with suspected interstitial lung disease. Lung India 2016;33:287‑91.
Sir,

We read with interest the original article titled “Correlation between clinical characteristics, spirometric indices and high-resolution computed tomography (HRCT) findings in patients of chronic obstructive pulmonary disease (COPD)” by Singh et al. [1]. In this study, the authors have rightly concluded that quantifying a complex and multisystem disease like COPD by spirometry alone is neither justified nor feasible in all cases. The authors further concluded that HRCT thorax may be used for holistic evaluation of COPD patients. However, using HRCT in all COPD patients may not be appropriate.

First, the radiation hazard associated with HRCT is a well-established fact. COPD and smoking are known risk factors for lung cancer. Many previous studies point toward the possible radiation risk even with a low dose computed tomography scan done as a part of regular lung cancer screening program. [2] Some studies further suggest a possible synergistic interaction between the risk from smoking and radiation exposure. [3,4] Hence performing HRCT in all COPD patients will further add to the risk of lung cancer in these patients.

Second, performing HRCT for all COPD patients will not be cost effective. This financial aspect becomes particularly more important in a resource-limited setting like India where even after a diagnosis of COPD patients may not be able to afford the cost of treatment.

High resolution computed tomography in chronic obstructive pulmonary disease patients: Do not forget radiation hazard

REFERENCES

1. Chockalingam A, Duraiswamy R, Jagadeesan M. Bronchoalveolar lavage cellular analyses in conjunction with high-resolution computed tomography imaging as a diagnostic intervention for patients with suspected interstitial lung disease. Lung India 2016;33:287-91.

2. Meyer KC, Raghu G, Baughman RP, Brown KK, Costabel U, du Bois RM, et al. An official American Thoracic Society clinical practice guideline: The clinical utility of bronchoalveolar lavage cellular analysis in interstitial lung disease. Am J Respir Crit Care Med 2012;185:1004-14.

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