Study of bronchoalveolar lavage flow cytometry analysis in diffuse interstitial lung diseases.

Background: Diffuse interstitial lung diseases are an heterogenrous group of respiratory diseaseswith difficult diagnosis. The study of bronchoalvolar lavage (BAL) by flow cytometry may define typical patterns in different diseases, providing some help in the differential diagnosis . The aim of this study has been to restrospectively analyze the clinical usefulness of flow cytometry analysis of the cellular and lymphocyte subpopulations.

Methods: We have study 104 patients retrospectively . Subjects were diagnosed of interstitial lung disease during 2.5 years. BAL cellular analysis by flow cytometry, histology and CT scanwere analysed in different diseases group. Percentage of T cells, B cells, NK cells, CD4, CD8 and CD4/CD8 ratio were analysed by flow cytometry as CD3+, CD19+CD4+,CD8 +,CD3+CD4-CD8-, and CD3+CD16-CD56-.

Results: The low incidence the diffuse interstitial lung diseases in our area was confirmed (1/10000 per year). Idiopathic pulmonary fibrosis (30%), and sarcoidosis (16%) were the most frequent diagnosis . Lymphocytosis and CD4 CD8 ratio was the most useful parameter. Thus, this ratio was high in sarcoidosis and it was inverted in extrinsic allergic alveolitis. It was also low in the bronchiolitis obliterans organizing pneumonia. Neutrophils were the predominant population in idiopathic pulmonary fibrosis.

Conclusion: The study of BAL is helpful to discriminate between interstitial lung diseases.