

## 2.04 Risk factors for pneumothorax in patients with interstitial lung disease undergoing transbronchial lung cryobiopsy

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**Background:** Pneumothorax is a common and serious complication of transbronchial lung cryobiopsy (TBLC), however less is known about factors that predispose patients to this. 76 interstitial lung disease (ILD) patients underwent TBLC between 2017 and 2023 in our tertiary hospital. **Methods:** A retrospective review of patients who underwent TBLC for undifferentiated ILD. Patients had work-up including high-resolution computed-tomography of thorax, ILD bloods, bronchoalveolar lavage (BAL) and pulmonary function tests. All patients had a chest x-ray post-procedure. The above patient data was assessed to see what factors can predispose patients to pneumothorax. **Results:** 19 patients (25%) had a pneumothorax related to their procedure. 5 (6.6%) patients required chest drain insertion and 11 (14.5%) required overnight hospital admission. Significant risk factors for pneumothorax included eosinophilia on BAL (41.67%vs21.9%,  $p<0.05$ ), neutrophilia on BAL (37.9%vs17.0%,  $p<0.05$ ) and the presence of ground-glass opacities on imaging (38.7%vs15.4%,  $p<0.05$ ). The presence of pleura on the biopsy sample was also significant (42.9%vs16.9%,  $p<0.01$ ). Factors such as age, lymphocytic BAL, peripheral eosinophilia and fibrosis or bronchiectasis on imaging weren't significant predictors of pneumothorax. **Discussion:** Evidence of acute inflammation on pre-TBLC work-up was a significant risk factor for pneumothorax during this procedure in ILD patients. **Conflicts of interest:** Authors declare no conflicts of interest **Keywords:** ILD, UIP, cryobiopsy, bronchoscopy, pneumothorax