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Session POSTER SESSION - Advanced Lung Failure and Transplantation

## 964 - Prospective Study of Comparison between Transbronchial Forceps Biopsy and Cryoprobe in the Diagnosis of Acute Rejection after Lung Transplantation



### Authors

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### Disclosures

**E. Daffrè:** None. **D. Tosi:** None. **R. Carrinola:** None. **I. Righi:** None. **F. Damarco:** None. **P. Mendogni:** None. **A. Palleschi:** None. **M. Nosotti:** None. **A. Mazzucco:** None. **C. Diotti:** None. **L. Rosso:** None.

### Abstract or Presentation Description

**Purpose:** Transbronchial biopsy (TBB) using forceps is the standard procedure to establish the presence of allograft rejection after lung transplantation. However, inadequate tissue samples, high degree of interobservers variability and possible complications seems to prevent many centers in scheduling TBB in lung transplant follow-up. We aimed to compare histological quality of cryobiopsy (CB) and conventional forceps biopsy (FB) for sampling lung tissue in transplants recipients.

**Methods:** Eligible for inclusion were adults subjected to scheduled transbronchial biopsy at 3, 6 and 12 months after lung transplantation. A single pathologist classified the biopsy according to ISHLT scale. From January 2019 to August 2020, 54 consecutive transbronchial lung biopsies procedures were included in the study. All patients underwent at least 6 biopsies with forceps and 3 with cryoprobe in the same lung lobe. Clinical, functional data and histological findings were collected.

**Results:** The diagnostic yield of acute rejection using cryobiopsy is 100% compared to 79% using biopsy forceps. The difference in proportion is 0.20 [95% C.I.: 0,11-0,29,  $p < 0,001$ ]. The diagnostic yield of airway inflammation is 64.2% using cryoprobe compared to 42.6% using transbronchial forceps biopsies. In this case, the difference in proportion is 0.22 (95% C.I.: 0,11-0,32,  $p < 0,001$ ; OR 7.0 C.I. 2,4-27,5). The diagnostic yield of chronic rejection is 90.6% using cryobiopsy compared to 68.5% using transbronchial biopsy forceps. The difference in proportion is 0.22 (95% C.I.: 0,13-0,31,  $p < 0,001$ ). Overall the major complication rate was 11%: there were 5 cases of pneumothorax, of which 4 required chest tube and 1 case treated conservatively. There were no cases of bleeding that required invasive treatment in the patient cohort.

**Conclusion:** Transbronchial cryobiopsy is effective for diagnosis of lung allograft rejection because it provides larger and more diagnostic lung parenchyma specimens than traditional forceps biopsies.