O-088

LATE AIRWAY COMPLICATIONS AFTER LUNG TRANSPLANTATION COULD BE PREDICTED WITH AUTO-FLUORESCENCE BRONCOSCHOPY

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Objectives:
The pathogenesis of bronchial complications after lung transplantation is associated to peri-anastomotic ischemia related to multiple risk factors. Auto-fluorescence bronchoscopy currently used in oncological diseases, can differenciate between ischemic and normal mucosa. The aim of this prospective study was to find a relationship between the degree of bronchial vascularization evaluated with auto-fluorecence broncoschopy and the onset of late airway complications.

Methods:
Study design: observational prospective cohort study. Patients were enrolled between January 2015 and August 2016. Exclusion criteria were: pediatric patient, ICU stay > 7 days, mortality < 6 months. All patients underwent auto-fluorecence bronchoscopy weekly during the first month after operation and next quarterly up to the first year. All procedures were performed by the same physician. Anastomosis were classified according to MDS grading system and considered complicated when rated greater than M0D0S0. The fluorescence was measured in terms of ratio between Red (ischemic mucosa) and Green (normal vascularized mucosa). We considered each anastomosis as a unit for statistical purpose. t-test or q-squared were used as appropriate. Generalized Estimating Equations (GEE) were used to account for R/G ratio repeated measure after $\log_{0.5}$ transformation.

Results:
Thirty-one patients were eligible for the study. Forty-five anastomosis (Group A) were non complicated while we observed 10 complicated anastomosis (Group B). There's no statistical differences between the two groups in terms of age and gender of both donor and recipient, BMI, cold ischemic time, donor smoking history. R/G ratio was similar in both groups at baseline (p=0.521). There was statistical difference regarding R/G ratio over time (p=0.037) - Figure 1. Decreasing trend regarding R/G ratio on $\log_{0.5}$ scale is statistical significant in both groups (p=0.001).
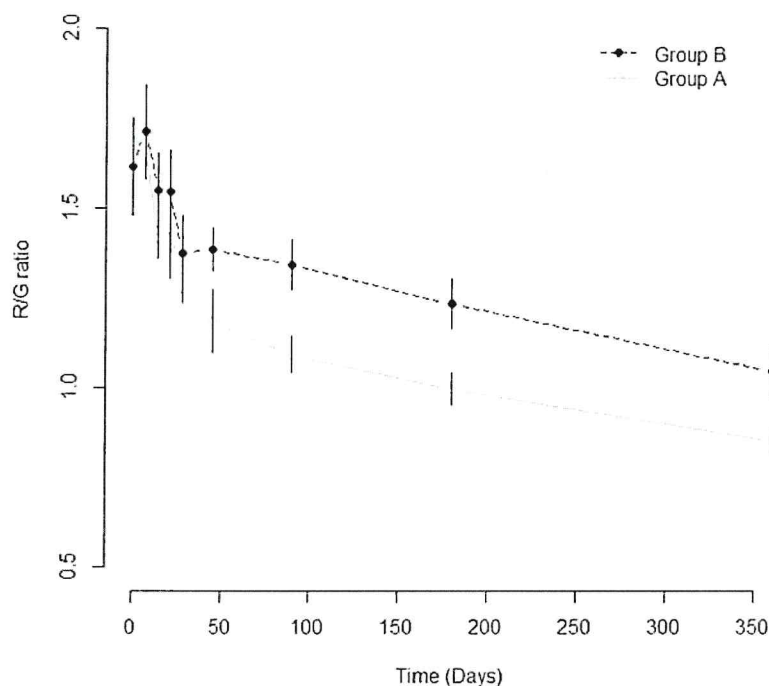
Figure1

Figure 1 : Mean values with relatives errors bars of R/G ratio over time in two groups (Group A: non complicated anastomosis; Group B: complicated anastomosis) p=0.037.
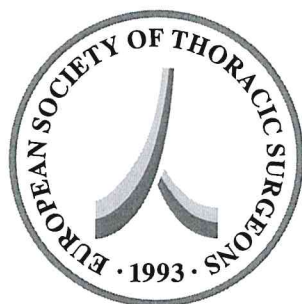
Conclusion:
Auto-fluorescence broncoscopy allows the assesment of vascularization of graft mucosa. R/G ratio could be a potential instrument to help clinician to predict airway complications in lung transplant.

Disclosure: No significant relationships.
Keywords: lung transplantation, airway complications, auto-fluorescence bronchoscopy

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