

Utilization of *Pseudomonas* Eradication Protocols Amongst Lung Transplant Centers

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INTRODUCTION

- Chronic airway colonization with *Pseudomonas* is associated with the development of chronic lung allograft dysfunction (CLAD) in lung transplant recipients (LTRs).
- Eradication efforts with inhaled and/or systemic antibiotics are common in the cystic fibrosis population.
- The aim of this survey study was to understand current *Pseudomonas* eradication practices for LTRs.

METHODS

- We developed a survey to assess *Pseudomonas* eradication protocols among lung transplant centers nationally and internationally.
- The survey instrument was distributed across transplant society listservs and emailed to infectious disease and pulmonary transplant colleagues.
- Responses were recorded directly into REDCap® (Nashville, TN).

RESULTS

- A total of 43 participants completed the survey from 5 different continents, mostly North America (n=27, 62.8%) and Europe (n=12, 27.9%).
- Respondents practiced at centers performing 26-50 (n=16, 37.2%) or 51-100 (n=17, 39.5%) lung transplants per year.
- Less than half (n=18, 41.9%) of centers reported having an eradication protocol in place. The specifics of these eradication protocols are outlined in Table 1.
- Success rates of *Pseudomonas* eradication with eradication protocols were largely unknown (n=9, 50%)

<i>Pseudomonas</i> Eradication Protocol Characteristics	n (%)
Reason for Lung Transplant	
Cystic Fibrosis	6 (33.3)
Early Transplant (less than 30 days)	1 (5.6)
All Lung Transplants	13 (72.2)
Other	2 (11.1)
Antibiotic Route	
Inhaled Antibiotics Alone	4 (22.2)
Inhaled + Systemic Antibiotics	14 (77.8)
Systemic Antibiotics Alone	0 (0)
Preferred Inhaled Antibiotic Choice	
Inhaled Tobramycin	11 (61.1)
Inhaled Colistin	6 (33.3)
Depends on MIC	1 (5.6)
Frequency of Inhaled Antibiotics	
Daily Until Stopped	9 (50)
Alternating Every 2 Weeks (Daily for 2 weeks, off for 2 weeks)	1 (5.6)
Alternating Every Month (Daily for 1 Month, off for 1 Month)	5 (27.8)
Other	3 (16.7)
Duration of Antibiotics	
1 to 3 Months	10 (55.6)
3 to 6 Months	3 (16.7)
Greater than 6 Months	3 (16.7)
Until Repeat Bronchoscopy Cultures Are Negative for <i>Pseudomonas</i>	2 (11.1)
Surveillance Bronchoscopies to Assess colonization	
Yes	9 (50)
No	9 (50)
Rates of Eradication	
25%	2 (11.1)
50%	4 (22.2)
75%	3 (16.7)
Unknown	9 (50)

Table 1. *Pseudomonas* Eradication Protocol Characteristics

CONCLUSIONS

Survey results show a lack of standardization in the management of *Pseudomonas* colonization and eradication at lung transplant centers. Among centers with eradication protocols, practices differ regarding the definition of eradication, target populations, treatment strategies, and surveillance. A multicentered study of *Pseudomonas* eradication in LTRs is needed to standardize practices and evaluate whether these practices are beneficial.