

Microbiological profile of tracheostomy patients with amyotrophic lateral sclerosis: a monocentric observational study

- [Maria Caterina Zenoni](#)
- [Paolo Gaboardi](#)
- [Andrea Lizio](#)

[Show More](#)

European Respiratory Journal 2024 64(suppl 68): PA1150; DOI: <https://doi.org/10.1183/13993003.congress-2024.PA1150>

- [Article](#)
- [Info & Metrics](#)

Abstract

Background: Amyotrophic lateral sclerosis (ALS) is characterized by upper and lower motor neuron dysfunction. Respiratory failure is a common event in the natural history of the disease, and, in the final stages of the disease, tracheostomy is an option patients choose.

Aims: (i) to determine the most common microorganisms identified in tracheostomies; (ii) to investigate if the prior duration of non-invasive ventilation (NIV) or gastrostomy (PEG) or tracheostomy impacts tracheo microbiology.

Methods: We retrospectively analysed endotracheal aspiration results from charts of ALS patients living with tracheostomy and followed at the NEMO centre between 1st January and 31st December 2023.

Results: 19 ALS patients (median age at onset: 60.30 [45.46 – 69.24]; male/female ratio: 2.80; bulbar/spinal ratio: 0.46) with 14 different microorganisms colonising tracheostomy were identified. *Pseudomonas* was present in 12 patients (63%). The longer the time in tracheostomy, the greater the number of microorganisms detected ($r=0.49$; $p=0.0338$) while no correlation emerged between the number of microorganisms and duration of PEG and NIV. Finally, 2 of 19 patients (11%) developed respiratory infection due to *Pseudomonas*. Respiratory acute events were not related to tracheostomy duration (10.19 months [8.93 – 11.44] vs 9.64 months [4.68 – 27.93] in patients with and without acute events respectively).

Conclusion: *Pseudomonas* is the most prevalent colonising microorganism in our cohort. Tracheostomy duration seems to impact tracheo microbiology in terms of number of microorganisms but not seem to facilitate acute respiratory events.

Footnotes:

Cite this article as Eur Respir J 2024; 64: Suppl. 68, PA1150

This article was presented at the 2024 ERS Congress, in session “Innovative perspectives on cellular mechanisms in lung diseases”.

This is an ERS International Congress abstract. No full-text version is available. Further material to accompany this abstract may be available at www.ers-education.org (ERS member access only).