

## Reducing the Burden and Improving QoL in Non-Cystic Fibrosis Bronchiectasis: Insights on Challenging Cases



Provided by RMEI Medical Education, LLC



This activity is supported by an educational grant from Insmed.

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### Case 1



Image is not of the actual patient

#### Presentation

68-year-old female with bronchiectasis after prior diagnosis of recurrent bronchitis diagnosed by her PCP

#### Pulmonary Function Tests

Mild restriction

#### Imaging

Chest CT revealed bronchiectatic changes in the lower lobes

#### Airway Clearance

Despite daily use of a handheld oscillating positive expiratory pressure device, she developed recurrent bronchitis treated with antibiotics

#### Sputum Evaluation

Unable to produce adequate sputum for evaluation

#### Bronchoscopy

- Grossly normal airways with scattered areas of purulence
- Cultures were negative for mycobacteria, bacteria, and fungus
- Improved following the bronchoscopy but soon developed difficulty controlling the secretions; requested VEST but insurance would not approve

#### Treatment

- Started on thrice weekly azithromycin and tiotropium bromide 2.5 mcg as a means of reducing recurrent exacerbations and controlling the secretions that seemed to offer some relief
- Difficulty maintaining normal weight; instructed her on using daily nutritional supplements

DOE, dyspnea on exertion

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## Rule Out Other Causes for Her Symptoms

- ✓ Gastroesophageal reflux disease
- ✓ Esophageal dysmotility leading to microaspiration
- ✓ Sinus disease
- ✓ Endobronchial lesion or foreign body
- ✓ Another mucociliary disease, such as primary ciliary dyskinesia

Hill AT, et al. *Thorax*. 2019;74(Suppl 1):1-69.



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## Case 2



Image is not of the actual patient

### Presentation

- 82-year-old female
- Persistent cough, phlegm, and shortness of breath due to NCFBE

### Chest CT

Extensive bilateral bronchiectasis

### Sputum Cultures

*Pseudomonas* (+), resistant to piperacillin/tazobactam and tobramycin



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## Inhibiting DPP-1

- DPP-1 activates neutrophil elastase in the bone marrow during neutrophil maturation
- Neutrophil elastase is associated with
  - Extracellular matrix degradation
  - Mucus gland hyperplasia
  - Increased mucus production
  - Reduced ciliary beating rate
  - Direct epithelial damage
- DPP-1 is currently an investigational target for the treatment of bronchiectasis

DPP-1, dipeptidyl peptidase 1

Usansky H, et al. *Clin Pharmacol Drug Dev.* 2022;11(7):832-842.



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## Thank you!

Please remember to complete the post-test and evaluation  
to receive CME credit.



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