Exploring Factors Associated with Negative Treatment Outcomes in Pulmonary Nontuberculous Mycobacterial Patients
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Abstract

Background: Nontuberculous mycobacteria (NTM) are found throughout the environment. NTM disease is an increasingly prevalent health issue. NTM experts estimate NTM disease to be as much as ten times as prevalent as TB in the United States and yet there have been relatively few studies on the epidemiology, natural history and management of NTM locally, regionally and nationally.

Objectives or Specific Aims: The objectives of this project are to build a working database for epidemiological study and to identify which factors associated with a negative treatment outcome in pulmonary NTM disease.

Methods or Approach: Once the database was created from origination, a retrospective data analysis of demographic, clinical and microbiological medical records of 33 pulmonary NTM patients seen at the University of Florida, NTM Clinic between 1/1/09-2/1/14, was done. Our hypothesis is that there are factors that predict poor treatment outcomes.

Results: Out of the 33 patients studied, we found 14 patients to have a positive treatment outcome and 19 to have a negative treatment outcome. Univariate analyses did not reveal variables associated with a negative treatment outcome. However, finding cavitation on a patient’s radiograph (p-value 0.065) did suggest a trend.

Conclusions: In this retrospective analysis of 33 pulmonary NTM patients, the only factor suggestive of an association with poor treatment outcome was cavitation. Our analysis to date is limited by the small sample size. Another limitation is that our case definition of poor outcome included side effects of medication. We aim to reanalyze the data in the near future focusing on a microbiological cure as the positive outcome measure. The growth of this database will enable investigators to conduct valuable research in the near future.