Comparison of Treatment Practices for Nontuberculous Mycobacterial Pulmonary Disease in Japan, Europe, and the United States

Jakko van Ingen, Jennifer Adjemian, Kozo Morimoto, Dirk Wagner, Christoph Lange, Charles Haworth, Jack Gallagher, D. Rebecca Prevots, Renu Gupta, David Griffith

Introduction
- Recent data from the United States suggest limited adherence to the American Thoracic Society (ATS) guideline that recommends a 3-drug regimen to treat patients with pulmonary disease caused by Mycobacterium avium complex (MAC) bacteria.

Aim
- To evaluate whether clinicians in Europe and Japan adhere to the ATS guidelines.

Methods
- Representative samples of physicians from Japan, 5 countries in Europe (EU5: United Kingdom, France, Germany, Italy, and Spain), and the United States extracted treatment information from records of patients with a confirmed diagnosis of nontuberculous mycobacterial pulmonary disease (NTM-PD).
- Treatment patterns in EUS and Japan were compared with published data from the United States.

Results
- In the EUS and Japan, a total of 619 qualified physicians with NTM-PD patients provided a total of 1,429 patient cases.
- In the US study, 349 physicians provided 915 patient cases.
- The percentage of patients with MAC disease who received oral antibiotic treatment was 99% in EUS and 96% in Japan.
- Physician-reported disease severity differed by region (Figure 1).
- A higher percentage of patients in EUS (68%) received treatment compared with patients in the United States (53%) and Japan (43%).

Discussion
- Treatment practices for NTM-PD differ among EU5, Japan, and the United States.
- Use of IV antibiotics is more frequent in the EU5 than in Japan or the United States. This is likely a function of disease severity, but its underlying dynamics warrant further research.
- The use of ATS guideline-compliant 3-drug macrolide regimens is limited in all regions, but particularly limited in the continental European countries.
- Further research is warranted to address gaps in appropriate treatment practices.

Conclusion
- ATS guideline-compliant treatment was most frequent in Japan.
- Further investigation is warranted to address gaps in appropriate treatment practices.