Introducing the Nontuberculous Mycobacteria Series for CHEST

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The recent publication of the multisociety guidelines for the treatment of nontuberculous mycobacterial (NTM) pulmonary disease marks the fifth effort, sponsored or cosponsored by the American Thoracic Society, to organize and condense existing knowledge about the management of these very difficult-to-treat organisms.1 The first major NTM publication was the seminal article from Dr Emanuel Wolinsky in 1979.2 That document reasonably could be considered the birth of modern clinical NTM awareness and investigation. In 1990, the first “Official” NTM Statement was published by the American Thoracic Society, followed by revisions and updates, recently in collaboration with other societies, in 1997, 2007, and 2020.1,3-5 Just as Dr Wolinsky was the pioneer in this area, Dr Richard Wallace contributed to all four documents subsequent to the Wolinsky publication, including two as lead author.1-5

The most recent multisociety publication is a watershed document, breaking with the past narrative documents and attempting to organize existing knowledge in a standardized and reproducible form. The current document uses the GRADE (grading of recommendations assessment, development, and evaluation) system to evaluate the quality of published evidence to answer specific PICO (population, intervention, comparator, outcome) questions.6 This process works best when there are multiple high-quality studies, optimally randomized controlled trials (RCTs), that support the PICO question responses. The stronger the supporting evidence, the stronger and more confident the GRADE recommendations. It comes as a surprise to no one that there is not a plethora of high-quality evidence on which to support NTM treatment guidelines, quite the opposite, in fact. In the management of Mycobacterium avium complex (MAC) pulmonary disease, there are few (six) published RCTs.1 By necessity, the new NTM guidelines depend on results from studies less rigorous than RCTs and expert opinion. Although perhaps somewhat disappointing in that regard, the document is an important advancement compared with past NTM guidelines by establishing a reproducible and consistent evidence framework for future NTM guidelines. Toward that goal, the available NTM medical literature has now been reviewed critically up to the present so that the tedious process will not have to be repeated entirely. Only new studies going forward will require comprehensive review, so the process itself should become easier with time. Hopefully, the quality of studies contributing to our knowledge base will improve.

The process also lends itself to the creation of a “living document” whereby important studies can be incorporated in the document with appropriate changes in recommendations in a much more rapid time frame. The rapid approval of new or revised recommendations by a committee comprised of many members from multiple societies is still a challenge, but one that is not insurmountable.

The new guidelines are a critical assessment of the available evidence that supports specific but limited questions about the treatment of a small number of NTM respiratory pathogens. Those limitations are dictated by the paucity of high-quality studies for most NTM questions. With the new structure, the guidelines cannot be a comprehensive “how to” guide for the
treatment of patients with NTM pulmonary disease. That process involves a multitude of nuanced and complex areas that cannot be answered or even addressed by a PICO question; clinical experience is often the only guide.

In a recent issue of CHEST, a “How I Do It” guide to the management of MAC pulmonary disease was published. Although there was an attempt to adhere as closely as possible to evidence-based recommendations from the new NTM guidelines, the document is obviously, unapologetically, and by necessity quite subjective regarding many aspects of MAC pulmonary disease management. For many clinical questions, there is simply no source of guidance other than clinical experience and expert opinion. This document, however, does attempt to fill in some of the practical management gaps that could not be addressed in the new NTM guidelines. Some of the recommendations in the MAC treatment document will be greeted with consensus; others will generate vehement disagreement.

Similarly, in this issue of CHEST, there is a review of the management of M abscessus pulmonary disease. This endeavor is even more challenging than the one for MAC because there is no empiric or a priori consensus on how to manage M abscessus pulmonary disease. In fact, both recent NTM guideline statements explicitly state that there are no universally accepted or predictably effective treatment regimens for M abscessus. Again, some of the recommendations in the M abscessus document will garner consensus; others will be greeted with passionate disagreement.

The MAC and M abscessus articles are the first installments in a series of NTM-themed articles submitted in partnership with the CHEST Editorial Board with the goal of expanding on the recent NTM guidelines, specifically, practical aspects of NTM pulmonary disease management. In coming issues of CHEST, we hope to address a few of the ambiguous and poorly defined questions about NTM management not only through different CHEST formats, such as the “How I Do It” MAC article and M abscessus CHEST review but also through Editorials, other CHEST Reviews, General Interest Commentary, Point/Counterpoint, CHEST Pearls, etc. We (D. E. Griffith and C. L. Daley) hope to retain a presence throughout the process but will invite multiple colleagues from various backgrounds to contribute as well, even those who do not agree with us (and you know who you are). Our goal is to provide practical advice for clinicians to help them treat these challenging patients without glossing over areas of controversy. Hopefully, this series of articles will also encourage discussion and collaboration among NTM clinical experts and investigators whose responsibility it is to design and perform the studies that will better inform the next NTM guidelines.

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References