

SPEAKER: So when we start to talk about radiographs and NTM lung disease, the way the picture looks actually becomes quite important. In patients with cavitary disease, like COPD patients, or even if they have bronchiectasis with capitation, it's very important to understand what those pictures look like and how the patient feels, because the treatment regimens do differ.

In general, when we see cavitations, we actually take a very aggressive approach. We start three drugs, plus usually an injectable aminoglycoside for diseases like MAC. Those would usually be a macrolide, such as azithromycin or clarithromycin, ethambutol, and then a rifamycin, which would be rifampin or rifabutin.

And then we would add the injectable aminoglycoside. The injectable aminoglycoside is typically intravenous amikacin. You can give intramuscular streptomycin as an alternative. We usually typically give these three times a week. And the oral drugs, we give daily in cavitary diseases.

Specifically, I'm speaking of MAC right now. As you know, MAC is the most common NTM in the United States, with more than 80% of isolates for NTM being positive for the MAC complex. When we think of bronchiectasis, an insidious cough with nodules, this is a different disease process in the sense that sometimes, these patients progress more slowly. So it takes a certain amount of clinical acumen, skill, and art to really understand how aggressive to be with these patients.

Typically, when someone presents with nodule or bronchiectasis without evidence of severe disease, meaning cavities or resistance, drug resistance, we can get away with three times a week therapy. Again, the therapy consists of a macrolide, clarithromycin or azithromycin, ethambutol, and a rifamycin. And that is dosed three times a week instead of daily.

This data actually came from a large study that was done at the University of Texas Health Science Center at Tyler, looking at over 200 patients, comparing daily therapy to three times a week therapy. And what was found in that study in the United States was that the majority of patients could convert their sputum with three times a week therapy with nodular disease and could avoid daily therapy, which is fraught with more side effects. As many as 85% of patients can actually have successful treatment with this. And this study was actually also confirmed by another study in Asia with our Asia colleagues, which found similar successful results.

So we typically treat with three times a week therapy for nodular bronchiectasis. And for more aggressive disease with cavitation, we switch to daily therapy. And certainly when someone has been treated, and their cultures remain positive, and they are progressing, we take a more aggressive approach with daily therapy.