

SPEAKER: The in vitro susceptibilities can be quite confusing to the common practitioner. And I want to outline, just briefly, the major things that you need to know. When you look at these susceptibility patterns or these sensitivity patterns, what you need to look at is clarithromycin, or the macrolide, and amikacin.

Unfortunately, many other things are often reported by many different laboratories. And this really becomes very important for treatment. As an example, I've seen a patient that's come into my office that because there was a big R, meaning resistant, by ethambutol and rifampin, the patient was not given those two drugs, so was only given azithromycin as monotherapy for her MAC lung disease. And she presented to me a year later and was resistant at that point.

What we understand is that the in vitro data does not correlate with what actually happen-- I'm sorry. Rather, the in vivo data does not correlate with what actually happens with the patient. And so what we need to understand is that amikacin and the macrolide are the two important drugs. The number for the macrolide for clarithromycin is greater than 32. It's resistant. And it's also important to know that number, because some laboratories will report some very confusing things to the practitioner.

So the treatment for MAC lung disease is long. And the way that we guide treatment is actually by cultures. So the term you must treat someone for 18 to 24 months is based on data for when someone becomes culture negative, meaning they don't grow the MAC anymore.

So in my own clinical practice, what we do is we check sputums monthly. And then we place people on therapy. And they basically mail in cultures. And the first negative culture means that, should they remain culture negative from that point forward, that they'll stay on treatment for one year.

Now, what we don't know in the literature is how often cultures should be checked. What we do understand is that they should be checked. So I know that's not great advice. But we recommend somewhere between monthly and every three months, while on therapy, that you check a culture.

And how do we do this? Well, most of the time, fortunately, it's pretty simple. The majority of our patients can cough up sputum. And they can certainly cough up sputum when you give them a little bit of help. In the clinic, you can do what's called an induced sputum.

You can give them hypertonic saline and maybe some device, such as-- I don't know, a flutter valve, or whatever's available, or a huff cough. And the majority of patients can cough up the sputum sample for you. You can also send people home with sputum cups. And sometimes early morning sampling-- people after being in a supine position can cough up a sample.

And what do you do when they can't-- they simply can't? Then you can certainly do a bronchoscopy and refer them for bronchoscopy in order to obtain better cultures. I rarely have to do this in my clinical practice. We have staff, fortunately, in our clinic that can induce a very good sputum. But I do believe that most clinical practices can do the same in a very safe and easy manner in the clinic setting.