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Mycoplasma Genitalium: A Look at the Hidden STI & the Updated Guidelines

Announcer:

You're listening to *Women's Health Update* on ReachMD, and this episode is sponsored by Hologic. Here's your host, Dr. Mimi Secor.

Dr. Secor:

Welcome to *Women's Health Update* on ReachMD. I'm Dr. Mimi Secor, Nurse Practitioner, and here to talk about mycoplasma genitalium and the challenges clinicians face regarding its diagnosis and treatment is Dr. Maria Trent. Dr. Trent is a Professor of Pediatrics, Public Health, and Nursing, and Chief of the Division of Adolescent and Young Adult Medicine at Johns Hopkins School of Medicine in Baltimore, Maryland. Dr. Trent, welcome to the program.

Dr. Trent:

Thank you so much for having me today.

Dr. Secor:

Starting with some background, Dr. Trent, can you give us a high-level overview of mycoplasma genitalium, or Mgen for short?

Dr. Trent:

Sure, mycoplasma genitalium is a bacterial infection that has been around for some time. I think people have certainly been aware of it since the 1980s. But it has emerged as an infection of interest in part because of some clinical observations that were made initially in men with non-gonococcal urethritis. And then subsequently in female women's health populations. So, it's a bacterial infection, but it's certainly it's a slow-growing bacteria. Doesn't have a cell wall, super fastidious, and so it's difficult to grow in culture. And so, it means that it may take six months to get a result back in an attempt to grow it in culture. And so, I think that for a long time, we did not have really a mechanism to diagnose mycoplasma genitalium easily in the lab and then subsequently clinically because of the lack of availability initially of commercially available tests. So, I think that now we are trying to explore its impact on different populations and how to integrate new technology into our clinical management of patients that may be affected by mycoplasma genitalium.

Dr. Secor:

So with that being said, Dr. Trent, can you walk us through a patient case that stands out to you?

Dr. Trent:

So I research with women who have pelvic inflammatory disease, which is a disorder really of the upper reproductive tract in women, so it's a lower tract infection, sometimes that sort of becoming all-encompassing and it involves the uterus and ovaries and fallopian tubes. So, for me, I see quite a few women who have mycoplasma genitalium.

The thing that we often see in patients as well is that mycoplasma genitalium doesn't also hang out alone. So, it's one of those sexually transmitted infections that you often will see as a part of a coinfecting state. And so commonly people might see chlamydia, for example, as a common infection, alongside mycoplasma genitalium, so I think it can present in any number of ways. Asymptomatic infection patient with a lot of symptoms that they are finding difficult to get rid of with commonly used antibiotics for infection such as gonorrhea and chlamydia. But then we also see patients who can become quite sick either through infection with just mycoplasma genitalium, but also sometimes with coinfection.

Dr. Secor:

Now, what are some challenges you've encountered when diagnosing Mgen? And how did you overcome them?

Dr. Trent:

So I've been really fortunate because I have had access to an outstanding research laboratory in my home institution where we're able to actually provide testing to women as part of our research studies. I think the challenge now is that not everybody who we think has mycoplasma genitalium is enrolled in one of those studies.

And so, for me, I saw a patient the other day that I am almost certain has mycoplasma genitalium. They were initially diagnosed and treated for pelvic inflammatory disease, had persistent symptoms did better initially, but then sort of had persistent symptoms. The gonorrhea and chlamydia testing were negative, and yet they continued to have symptoms. And so, what would be great for me now is then to be able to have that woman be tested and treat it for mycoplasma genitalium. But because she was not enrolled in one of our research studies, she really doesn't have access to the testing. We attempted to send her to an outside lab, but they wouldn't let her give her self-collected vaginal spec swab at the site, even though it's easily collected in any restroom at any type of lab environment in the same way as a woman would give a urine sample, and so she really struggled. And then you have to make a decision blindly about whether or not you're going to treat that patient with antibiotics that cover mycoplasma genitalium or you're going to go in a different direction. So, I do really think that some of the difficulties that we're having, may be related to gaps in resources available to care for patients and so access to testing, access to resistance testing, all of those things are going to be really important for us to be able to take really good care of women who we suspect have mycoplasma genitalium.

Dr. Secor:

Thank you, Dr. Trent. For those of you just tuning in, you're listening to *Women's Health Update* on ReachMD. I'm Dr. Mimi Secor, Nurse Practitioner, and I'm speaking with Dr. Maria Trent, about mycoplasma genitalium, which is also known as Mgen.

So, Dr. Trent, now that we've taken a look at the diagnostic challenges associated with Mgen, let's move on to therapeutic considerations. What do the CDC STI guidelines recommend for treating this infection mycoplasma genitalium?

Dr. Trent:

One of the things that I really recommend that providers do is to get to know the new guidelines for treatment of sexually transmitted infections. I think the CDC spends a tremendous amount of time and effort to make sure that those guidelines are evidence based. So, I think what they do say is they, like me, they also are very thoughtful about this notion of whether or not you have resistance testing or not. And so, they base their guidelines on whether or not you have that.

The recommended diagnostic method for determining whether or not a person is infected with Mycoplasma genitalium, it's going to be nucleic acid amplification testing. The challenge still remains that we do not have molecular tests for macrolide or quinolone resistance testing in the United States. And so, unless someone has a research laboratory that is connected to their hospital laboratory or the commercial lab that they use where there are FDA-approved analyte specific reagents that they can use in the lab to test for resistance, then we won't have access to that testing globally. So that's the challenge that still remains, because knowledge about resistance allows us to better guide treatment for patients.

So, if you have resistance testing, then you would use an old antibiotic like doxycycline for a week and then that would be followed with a short course of azithromycin. If the person is resistant to macrolides, you would still use doxycycline but you would go straight to treatment with moxifloxacin because of that approach that I share with you previously, where doing some treatment, figuring out whether or not there is resistance presence or not, really does lead to a more effective cure for these patients. I think the situation that most people are in is that they don't have resistance testing available. And the mainstay for those patients who test positive is really the use of doxycycline, followed by the short course of a moxifloxacin or the equivalent course of moxifloxacin to follow. So, I think that thinking through, what you have access to, what antibiotic is going to be right for your patients. And then this is whole other layer of whether or not your patient can actually take those antibiotics that you'll have to sort through, but I think the CDC does a nice job of walking us through that in the new guidelines.

Dr. Secor:

And in your experience, what are some of the biggest challenges you faced when it comes to treating this infection? How did you deal with these?

Dr. Trent:

The biggest challenge really is making sure I understand what the patient has. While I'm a clinician, I'm also a scientist. And so, for me, I think in the United States, is particularly a very well-developed country, we have tons of resources, that if there is a test and an assay that would help me better diagnose a patient's disorder, and I could be more precise, then we're able to provide much better care. I would even go as far as to say it's one of the things I'd love to have is actually a point-of-care test for mycoplasma genitalium, but that's perhaps me just dreaming at this point because I think people need to know their results in real time, being to really communicate with people about what they have, I think is critically important. I'm excited about how technology is moving us in that direction. I don't think

we're there yet. I think the next thing we need really is resistance assay to go along with now a nucleic acid amplification test that is on the market. And that test, I think will change how we take care of patients, but it won't necessarily give us the level of detail that we need in order to refine the diagnosis for patients in terms of administration of antibiotics. I think we worry quite a bit about antimicrobial resistance in our current space. We want to make sure that we have enough options for people for a variety of diseases. And so, I think that resistance becomes a major threat. In a very short time. I think since we've been diagnosing and treating this in other countries, we've seen that the resistance profiles have really become an issue.

Dr. Secor:

Thank you. Finally, do you have any advice for our listeners when it does come to diagnosing and treating Mgen?

Dr. Trent:

According to the guidelines, there are really patients who are symptomatic, right? So, a patient who may present with a penile discharge that is gonorrhea and chlamydia negative or did not respond to treatment initially, patients who may be suspected of having pelvic inflammatory disease, who again may not be getting better or have persistent discharge. So, I think that asymptomatic screening is not the recommended strategy per the CDC guidelines, but certainly for treatment.

It's a challenge because in our research, we do really demonstrate amongst women who have PID and in the general population many people have asymptomatic *Mycoplasma genitalium* infections. But I think that the CDC is concerned about overtreatment, antibiotic resistance, particularly in an era where we do not have, broad access to a resistance testing, and that remains a challenge.

The 2021 CDC STD treatment guidelines clearly outline a plan of management of sex partners, which is the cornerstone of secondary prevention for sexually transmitted infections. So there have not been a significant amount of studies that look at the impact of treatment on reinfection for partners. But because we do see *Mycoplasma genitalium* in both men and women it is important consideration. So obviously patient's, partners should be offered the opportunity for testing. And obviously, if those partners test positive, they certainly can be treated within the context of a dyad to reduce the chance of reinfection. If that's not possible, certainly the same antimicrobial regimens that were provided to the patient can be provided to the sex partner as well.

And I think we also have to think very carefully and thoughtfully about how we manage partners of men who have resistant mycoplasma infections. It's not something we talk about a lot. We often talk about the patient in isolation, but I do think as people who are thinking about the whole patient, I think we do have to consider that and how we're going to treat women who are connected to those partners.

Dr. Secor:

These are excellent points. Thank you, Dr. Trent.

Considering the multitude of challenges associated with the diagnosis and management of mycoplasma genitalium, I want to thank my guest, Dr. Maria Trent, for joining me to share her clinically focused real-world strategies for overcoming these challenges. Dr. Trent, thank you so much for being here.

Dr. Trent:

Thank you again for having me today.

Announcer:

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