

Mayo Clinic Q&A podcast: Endometriosis

Fri, Sep 23, 2022 3:36PM 21:16

SUMMARY KEYWORDS

endometriosis, patients, imaging, mri, surgical, disease, mayo clinic, pelvis, uterus, care, tissue, symptoms, surgery, gynecology, wendy, radiologist, bit, female pelvis, women, radiology

SPEAKERS

Dr. Halena Gazelka, Narrator, Dr. Wendaline VanBuren, Dr. Tatnai Burnett

N Narrator 00:01
Coming up on Mayo Clinic Q&A

D Dr. Tatnai Burnett 00:03
Endometriosis a very common condition that about one in 10 women, so 10%, 11% or so have endometriosis. Some woman do not have significant symptoms and wouldn't go to a doctor, or minimize their symptoms or think they're normal. So, if anything that estimates probably on the low side of what actual reality is.

N Narrator 00:25
Endometriosis is an often painful disorder in which tissue that normally lines the inside of the uterus grows outside the uterus. It most commonly involves the ovaries, fallopian tubes and the tissue lining your pelvis. Treatment and care of endometriosis often begins with the correct imaging to diagnose the problem.

D Dr. Wendaline VanBuren 00:44
One thing with endometriosis is that well, it can involve the ovaries, it can involve all these sites on the surface of the uterus, the bowel, the ureters and all the structures around it. MRI gives us a little bit more of a global perspective of the pelvis. MRI gives us that global information.

D Dr. Halena Gazelka 00:59

Welcome everyone to Mayo Clinic Q&A. I'm your host Dr. Halena Gazelka. Endometriosis is an often painful disorder in which tissue similar to the tissue that normally lines the inside of the uterus, this is called the endometrium, grows outside of the uterus. With endometriosis, the endometrial-like tissue acts as endometrial tissue would - it thickens, it breaks down and bleeds with each menstrual cycle. But because this tissue has no way to exit your body, it becomes trapped. Fortunately, effective treatments are available. Imaging, including MRI, is an important step in evaluating patients with endometriosis and can impact treatment options and even surgical planning. Here to discuss is Dr. Wendaline VanBuren, a Mayo Clinic radiologist specializing in gynecologic imaging, and Dr. Tatnai Burnett, a Mayo Clinic gynecologic surgeon. Welcome to both of you. You're going to both be able to answer all of our questions about how we diagnose and how we treat. So thanks for being here.

D

Dr. Tatnai Burnett 02:01

Happy to be here. Thanks for having us.

D

Dr. Wendaline VanBuren 02:02

Thanks for having us Halena.

D

Dr. Halena Gazelka 02:04

Tatnai, I'm going to address the first question to you. How common is endometriosis?

D

Dr. Tatnai Burnett 02:10

So, endometriosis is a very common condition. You know, most of our studies, which are looking at women who have symptoms, would suggest that about one in 10 women so 10%, 11% or so have endometriosis. Now, the difficulty here is that some women do not have significant symptoms and wouldn't go to a doctor, or minimize their symptoms or think they're normal. So, if anything that estimates probably on the low side of what actual reality is, but at least one in 10 women or so.

D

Dr. Halena Gazelka 02:43

That's significant. I had no idea that was the incidence. Can you tell me, are there risk factors for developing endometriosis?

D

Dr. Tatnai Burnett 02:51

There definitely are. And you know, one of the primary ones is going to be just a family history. So if you have a first or second degree relative with a history of endometriosis, you're definitely an increased risk. There are other things like increased exposure to estrogen. So if you have shorter periods, earlier onset of periods in life, later menopause in life, that will also increase

your risk a little bit. Similarly, having multiple children decreases your risk. Having no children increases your risk. Some studies have suggested that low body weight is associated with endometriosis as well. That said, you know not a lot of these are significantly modifiable. Yes, you can change how many kids you have and so on. But a lot of these are just things that people are going to develop without being able to significantly change their risk.

D Dr. Halena Gazelka 03:43

So if a patient comes to you with what sounds like endometriosis, how do you go about evaluating and diagnosing?

D Dr. Tatnai Burnett 03:52

Yeah, so I would kind of put patients in two categories with endometriosis. Patients without symptoms aside, I never see those patients, they don't have symptoms, they don't come to me. But the other types of patients are going to be either patients who have fertility problems and come because they can't get pregnant. And usually that's to one of my fertility colleagues who also specializes in endometriosis. Or they come because they have pain related problems. And that can be painful periods, chronic pain, pain with intercourse. Everything kind of under those those categories. When I see those patients, we work up their symptoms, we try to figure out what to do for that patient based on how they present. Know what is the goal of treatment, what problem do they need to solve? And oftentimes, almost always, we are going to have some sort of imaging and the imaging is again directed by what the symptom is or what the issue is that we're going to solve. The vast majority of patients are going to come to me already having something like a basic trans-vaginal, trans-abdominal ultrasound, kind of our routine standard imaging for looking at women's organs. And that can show us some types of endometriosis, but not most. Usually, in most patients with endometriosis, that may actually be completely normal. And then in some situations, we're going to order more advanced imaging. And here at Mayo Clinic, we use MRI which Dr. VanBuren is going to certainly tell us a little bit more about. And certainly, if we're going forward with surgery, if patients have symptoms associated with a bowel or bladder, if they have any nodules or other imaging features on ultrasound, we're really going to push for an MRI to really help direct care, to coordinate surgery, and make a surgical plan so we can take care of the patient appropriately.

D Dr. Halena Gazelka 05:38

Wendy, tell us about MRI, why is this used to diagnose endometriosis? And how is it different than other types of MRIs?

D Dr. Wendaline VanBuren 05:47

Yeah, that's a great question. So, as Tatnai mentioned, so ultrasound is a great way to start for the evaluation of the female pelvis because it's easily accessible. And it gives us a lot of information about the ovaries and the uterus. The problem with endometriosis is that, while it can involve the ovaries, it can involve all these sites on the surface of the uterus, the bowel, the ureters, and all the structures around it. So MRI gives us you know, a little bit more of a

global perspective of the pelvis. So that's where the advantage falls. So sometimes explain it like ultrasound is like looking through a telescope. So if you know exactly the star that you're looking for, the constellation, you can find it. But if you don't know what you're looking for, and oftentimes, the pain associated with endometriosis is nonspecific. And we can be a little bit uncertain, even though there are certain disease patterns, the MRI gives us that global information. So that's one of the reasons why I like MRI, because ultrasound can give us some indication of what can be going on, but we get the whole perspective. And as opposed to patients going to surgery when they, you know, may have either uncertain diagnosis of endometriosis, or perhaps the knowledge of some findings. The MRI gives us that detailed look of everything. So if there's uterine involvement, you know, we can involve somebody from urology to join the surgical team. If there's bowel involvement, that becomes a really complex interpretation. And we use a multidisciplinary care team that Tatnai can attest to there, that they you know, organized before. So it's the appropriate OR setting and those patients are given the appropriate counseling as to the surgery they're going to receive, and the care that's necessary for that. But there's also more disease sites that are even a little bit less common, but certainly very involved in terms of patient treatment. So nerve involvement is not entirely uncommon. So of course, then that becomes a dialogue potentially even with neurosurgery. And, you know, it's very, very complex. So the MR protocols that we use are generally targeted to the female pelvis. So as opposed to a general pelvic MR, which would be scanned in planes that are, you know, totally parallel to the pelvis, the female pelvis is really complex, and every woman's pelvis is different. So the orientation of the uterus and the ovaries is different. Normally, but even with endometriosis, there are patterns of changes related to the disease. So a lot of times there's inflammation and fibrosis that results in the uterus changing and tilting position. So what we do is we have really skilled technologists that we work with in our MRI team, and they orient the planes to the orientation of each woman's organs, we take a look at that in, you know, in a number of different ways, and that we look at in a really small field of view. So we're able to see the really tiny deposits that are related to endometriosis. And so that's where we start with things. And then we've built the protocol over time to nuance it in terms of the areas in the disease sites that we know that it occurs.

D

Dr. Halena Gazelka 08:37

Amazing. I would love it if you would both tell me about the MRI-based interdisciplinary conference that you have. What does that mean? And how did it start?

D

Dr. Tatnai Burnett 08:49

Sure, I'll go first. But this was a joint venture between radiology and gynecology. This really as a true shared model. Dr. VanBuren and I, Wendy and I started here at Mayo Clinic around the same time. We both had a strong interest in endometriosis from our prior training. And as we began to review cases together and just understanding the intricacies of reading MR for endometriosis, we just realized that a multidisciplinary approach, where we review things together, was just in the best interest of the patient because it gives us the best coordination of care between the radiologist and the gynecologist. It gives us a nuanced interpretation of what the imaging means for the patient. And then it allows us to apply what we see in the imaging to our surgical plan and to the surgical team. So it's really grown into a multiple specialty involved process. We disseminate the information from our meeting to our surgical team. And then we use all the information that we gather to really make the best plan for the patient in the

interest of the patient to it in regards to the patient's goals and what they need. So it's honestly been one of the great pleasures of being working here at Mayo Clinic. Working in a multidisciplinary fashion with other specialists who have shared interest, and really putting that together to work towards the patient's goals and interests.

D Dr. Halena Gazelka 10:15

Wendy, what can you share with us about the interdisciplinary conference from a radiologist viewpoint?

D Dr. Wendaline VanBuren 10:22

Yes. Well, I mean, I think it's been a great collaboration. And it started in a very organic manner, just based on mutual clinical interest in these patients that we both had as fellows. And so in a very casual manner, you know, we said, why don't we sit down and take a look at these MRIs for these patients, because, it is worth mentioning, it was not the standard of care seven years ago to do an MRI for endometriosis, preoperatively. So we decided that we would sit down and we would take a look at a few patients, and then, prior to the OR, and then review the OR findings afterwards. And so it's through that process of learning, that we honed our skill sets, between the radiology and gynecology departments, and we involved more individuals in those teams. And it grew to be the program that is today. So, you know, along the way, a lot of research initiatives have kind of been born out of that, but they're really all a reflection of the clinical work in that process that we've done. So, we think even in 2020, we published a paper that showed that we had 20% change in patient management based on these rounds. So, you know, it just goes to show the more communication we have, and, you know, we all have our own expertise. And when we're able to collaborate and share, hearing the clinical stories, looking at the imaging, putting together the considerations for management, whether that be medical or surgical planning, we're really able to make a huge impact.

D Dr. Halena Gazelka 11:41

What a beautiful example of the Mayo model of care, where we seek input from colleagues, and there's no competition for patients, we share patients, and we share information with each other. And this just arose organically with the two of you. I think that's just wonderful. Thank you for sharing that.

D Dr. Wendaline VanBuren 11:59

You're welcome.

D Dr. Tatnai Burnett 12:00

Absolutely.

D

Dr. Halena Gazelka 12:02

So are there types of endometriosis that you cannot see an MRI?

D

Dr. Wendaline VanBuren 12:09

Yes, that's true. So endometriosis has, essentially, from the pathology standpoint, three different types of disease characterization. So one is like complicated, blood filled cysts in the ovaries called endometriomas. And then there's the disease that sits on the surface of the pelvis. And it has two classifications based on how deep that goes, so superficial or deep. And the deep disease is the one that often requires that complex surgical planning. So it's the patients who have superficial disease that may or may not be seen on MRI. So often, we don't see it, if it happens to have a lot of a hemorrhagic component we can. But Tatnai, do you want to comment on that? Because I know that you can speak to that's typically a laproscopic finding in the OR.

D

Dr. Tatnai Burnett 12:54

Our history of endometriosis and how we've diagnosed it has changed kind of over time. And this question really speaks to that. We used to say you don't have a diagnosis of endometriosis until you have a laparoscopy and you get tissue and you have a biopsy. Nowadays, because our imaging has advanced so much, and because we want to have women treated earlier, we are, number one, willing to use symptoms to start treating patients. And number two, we can see disease on imaging and know it's endometriosis by its disease signature and start treating patients. But definitely, as Wendy mentioned, the superficial disease, that disease that just sits on top of things, is the most difficult to see in any way before going to surgery. But the important thing is, when we see disease on MRI, it really allows us to do complex surgical planning. So if I need to involve other surgical specialties that allows me to do that, when we can't see it. I know by definition, it's just kind of going to be the superficial stuff just sitting on things, and I can remove that myself. And so while it does remain a little invisible to us, we can still treat it based on symptoms, we can still go to the operating room and manage it. The MRI still remains an excellent tool to plan our complex surgical cases, even though that one subtype isn't ideally identified on it as yet.

D

Dr. Halena Gazelka 14:17

Interesting. Wendy, you said something earlier that piqued my curiosity, and I'm sure that of our listeners. You were talking about having published about your work here. And I'm curious, has your work together here at Mayo Clinic influenced imaging implementation or education in other areas of the United States?

D

Dr. Wendaline VanBuren 14:40

Yep. Well, we sure hope so. So that's the goal. So, probably at about the same time after we started this interdisciplinary conference, we were starting to gain a little bit of interest and traction here and heard of a potential collaborator who was interested in starting a national

committee with me for this. So that was very exciting. So we started a disease focus panel for endometriosis through the Society of Abdominal Radiology, and Tatani's on that committee, as our surgical advisor. And so what we did then is organized a group of individuals from academic institutions predominantly from around the United States, Canada, and several other countries. And it was a way for us to build information sharing. So the use of our protocol, we come up with our own template and lexicon. So the words that we use to describe endometriosis on imaging, standardization processes, educational resources. And then finally, we did have a special edition that we, that I was the guest editor for. So we had 27 unique papers as part of that, that were a reflection of some of these practice innovations that we've had, and a lot of educational tools about how to start in MR interdisciplinary conference, how to build some of these ultrasound MR considerations into your practice, how to report them, and how it impacts our patient management. So that was a great initiative. And I think that, now we're in our seventh year, there's been several turnover of chairs and people involved in ongoing projects that just continue, continue on. So it's exciting to see now collaborations between societies, from gynecology and radiology together. And just the momentum, I think that endometriosis imaging has had globally. You know, we're not the only country that's doing things, other countries around the world are also working really hard to advance endometriosis imaging and treatment. So I think it's exciting, you know, from that front to see that this is, although it's an extremely prevalent disease, and has a huge impact on society, that there are governments and countries that have really put this at the forefront of their initiatives.

D

Dr. Halena Gazelka 16:44

It's wonderful. Tatnai, what have you seen on your side from the surgical perspective with more use of MRIs?

D

Dr. Tatnai Burnett 16:54

The state of endometriosis surgery in the U.S. really is that we have a small number of surgeons who are really dedicated to this disease, and practice some of what we think are best practice techniques in removing it. The bigger question for us is, how do we as a obstetrics and gynecology subspecialty create an environment where women can go to any gynecologist and receive high quality, endometriosis care and surgery. That's been a little bit more difficult. I will say that, working with radiology, through Wendy and the disease focus panel has just been a lesson in how collaborative we can be across the country, how we can disseminate best practices. It seems a little easier in that respect on the imaging side. On the surgery side, it seems to be a little bit more difficult to really kind of unify practice patterns. I have hope that in the future, we can do something similar to what we've done with other diseases like depression, or heart disease or cancer, where we develop this model of the cancer center or the depression center where we have specialized care centers where complex patients are sent because we know that the level of expertise is there. So can we identify as centers of excellence for endometriosis where, you know, "Oh, I see these imaging features on MRI, I need to send this patient to see a doctor who knows how to take care of this degree of complexity," instead of taking a patient to the OR and then saying, "Oh no, I can't do this," closing the patient up and now they're getting multiple surgeries and not being not being addressed in one surgery. Our goal here has always been to take care of the patient with a single surgery. And that's what imaging really allows us to do. It allows us to examine where the disease is and make a surgical plan and then do a single surgery to take care of the patient if surgery is the

way we go, or do medical management and monitor the disease if that's the way we need to go. So the path to getting to a more comprehensive way of caring for patients in the United States is not an easy one. But I think there is a vision, I think there are models that work for it. And it's going to take some additional traction in our professional societies to get to that point.

D Dr. Halena Gazelka 19:28

I so appreciate what you said about wanting all women to have access to good gynecologic care. Because you said how common this was at the beginning of the program, that 1 in 10 may suffer from this and so it's not just for your patients that you're seeing here at Mayo Clinic but you're doing this work for all patients, really. I think that's inspiring.

D Dr. Tatnai Burnett 19:51

That's right. Yeah, it's a burden for us, but you know, we do this because we love the work. We do this because it helps women live better, fuller, healthier lives. But there's only one of me and one of Dr. VanBuren. And we have counterparts that do similar to us, but we don't have enough access right now for some of the specialized care. And we need to do better.

D Dr. Halena Gazelka 20:17

Thank you both for being here.

D Dr. Wendaline VanBuren 20:19

Thank you for having us.

D Dr. Tatnai Burnett 20:20

It's been a pleasure. Thank you.

D Dr. Halena Gazelka 20:22

Our thanks to Dr. Wendy VanBuren, a Mayo Clinic radiologist, and Dr. Tatani Burnett, Mayo Clinic gynecologic surgeon, for being here today to talk to us about endometriosis and its evaluation, imaging and treatment. I hope that you learn something. I know that I did. And we wish each of you a wonderful day.

N Narrator 20:44

Mayo Clinic Q&A is a production of the Mayo Clinic News Network and is available wherever you get and subscribe to your favorite podcasts. To see a list of all Mayo Clinic podcasts, visit [NewsNetwork.MayoClinic.org](https://www.mayoclinic.org/news-network). Then click on podcasts. Thanks for listening and be well. We hope

you'll offer a review of this and other episodes when the option is available. comments and questions can also be sent to MayoClinicNewsNetwork@mayo.edu.