[MUSIC PLAYING]

TED LEE: Thank you, everybody, for joining me today to talk about endometriosis from history and exam to OR. My name is Ted Lee. I'm the Director of Minimally Invasive Gyn Surgery at Magee Womens Hospital at UPMC. And just a little bit about my disclosure, which is none. I don't have any conflict of interest. I don't have any honorarium or anything from any companies.

So the objective of this talk is to go over some of the nuances in the history and exam to help our surgeons to optimize patient selection for endometriosis surgery. And also, throughout the history and exam, we also would help some of the referring physicians to help them to diagnose and to allow them to screen some of the patients that may be candidates for referrals.

And in addition, we'll apply the result, the imaging studies, with optimal surgical planning, and so that you can do proper informed consent for those patients. And also for the general practitioners, that they can also give patients some ideas about what to expect when they have evidence of severe endometriosis. And then, to allow us to appreciate the importance of multidisciplinary team for the treatment of deep invasive endometriosis.

And so when it comes to history, it's obviously, if you look at the slides, it is pretty straightforward. Age suddenly is very important, onset of the patient's symptoms. For example, your patients present to you at age 45, have new onset pelvic pain, chances are that the patient's diagnosed endometriosis is much less likely.

So a typical presentation of patient's symptoms will start from their teenage years, progressive gets worse in their 20s. And then, so those are the typical age presentations. Certainly, a patient may present to you at a later age. But they may have symptoms that started much earlier in their life.

Gravidity and parity is obviously very important factors that we record in when you take a history for probably pain. Patients, for example, if they have been pregnant in the past, if they have previous C-sections, that may predispose them to endomeiosis as well as abdominal wall endometriosis.

And if the patient is G 0 P 0, then [INAUDIBLE], you have to ask yourself is the patient have been trying to get-- trying to prevent pregnancy? Or they have unprotected intercourse for years and just couldn't get pregnant? Those are the kind of things that you need to ask and figure out why they are the way they are.

And obviously, you have to ask them whether they want to have future fertility, either done with childbearing and no-- have no more interest in fertility or-- because you have to decide what you want to do with fertility, conserving surgery versus of a hysterectomy and salpingo-oophorectomy. And whether patients are presenting to you with pain or infertility or both.

Onset of symptoms, I mentioned before, is very, very important. So whether the pain started at-- in their early teens and early 20s or they started after their C-sections or after childbirth. Those are important questions to ask.

Dysmenorrhea, Dyspareunia, Dyschezia-- sort of the three D's that has been commonly associated with endometriosis is also very important. So when it comes dysmenorrhea and dyspareunia, you have to ask the patient, when you have pain with your period, is on the right side or left side? And as always with dyspareunias, if they can localize the location of the pain when they have intercourse. And same with dyschezia, because dyschezia is also patient may have lateralized pain with bowel movement. And then, sometimes, they would only have dyschezia only during their menstruations.

Location of the pain is obviously very important and whether it's especially if they have lateralized pain that's worse with menses versus a generalized pain with their period. Lateralized pain with menses has a lot of higher positive predictive value. The temporality of a pain-- whether it's intermittent, constant, relationship to menstruation, ovulation-- that's all important things to ask when you take a history of a patient with pelvic pain and so on.

The next slide here. Quality of pain it's obviously it's good to record, but it's not so important, because except for if they describe the pain as associated with different dramatic descriptors like hot, searing knives sticking on my butt, that kind of descriptions, or they said they-- Those are the kind of things that may suggest some of the psychological impact on patient's life.

Exacerbating factors of their pain and other associated menstrual symptoms-- with menorrhagia, menometrorrhagia, amenorrhea, oligomenorrhea. Those are important, especially in patients with menorrhagia, menometrorrhagia. They might have associated uterine pathology like endomeiosis and fibroid. And GI/GU symptoms like dysuria, pain with full bladder, hematuria, hematochezia-- those may suggest some of the visceral endometriosis in the bladder or in the bowel.

The severity of the pain. Is the pain it's just annoying? Or it's just debilitating-- they are not able to work or go to school, frequently absent from school or work? And also, the effect of the pain on the relationship with their loved ones, because that obviously is very, very important thing to ask. And that will tell you that-- how much they want or need help for their pain.

And their previous response to medical treatment of birth control pills, progestin, Mirena IUD, Lupron, whether any of those modalities have helped the patients or not helped the patients. And their previous surgeries, whether patient had prior diagnostic laparoscopy, or other laparoscopy, or laparotomy for endometriosis or pelvic pain.

Obviously, if the patient have prior open surgery for endometrioma, that will tell you that they likely have very, very severe endometriosis. Of course, if they have prior conversion from laparoscopy to laparotomy, that is also important things to ask, because likely if they, for example, if they have endometrioma, and they converted to open surgery because of the distortion anatomy, that will tell you about the severity of disease.

Prior C-sections, tubal ligation, endometrial ablations-- those are the kind of things that would also be impactful in terms of your differential diagnosis, especially in patients with prior endometrial ablations. They may develop post ablation syndrome that could be a source of their pain. So if they tell you my pain started after I had endometrial ablations, that is likely scenario. And also, a patient with endometrial ablation may have the retrograde menstruations with iatrogenic endometriosis after ablation as well. Those are the factors to consider.

And many times, when I see patients, they already have prior laparoscopy. And they've been told that they have a negative laparoscopy. There was no endometriosis. And what does that mean? You review the op report and frequently say there's no evidence of endometriosis.

And unfortunately, most of the op report, the description I get on the op report, is very, very minimal at times. There was no mention as to what areas they were able to inspect. Is it negative, because they were not able to expose the cul-de-sac or the pelvic side wall? And then, they call it negative. Or is it truly negative?

So ideally, that when you at least when I have my residents dictate diagnostic laparoscopy, I want them to address different areas of common [INAUDIBLE]. I want them to mention that we inspect the pelvic side wall. There was no evidence of endometriosis on the pelvic side wall, the cul-de-sac, uterosacral ligaments, and the bladder flap. There was no evidence of endometriosis in those areas. So you want to document. You want to document all the various areas inspected and say that there's no endometriosis.

And also, the patient may have [INAUDIBLE] to have negative laparoscopy is because that-- the inspection was not done in a way that allowed diagnosis of endometriosis. Many times, the laparoscopy has to be virtually on top of the tissues for you to see some of the more subtle endometriosis that has more a vesicular, clear appearing lesions.

Some of the peritoneal pockets that may reside in the cul-de-sac and can be also endometriosis can be hidden behind the uterosacral ligaments. But it's missed because they did not bother to look in those areas. So sometimes, you have to take the so-called negative laparoscopy with a grain of salt. And for sure, if the op report is dictated by someone you trust, and you know they are very, very meticulous in their inspections, and then they can be truly negative.

And sometimes, the patients may have been told that they have endometriosis. And they may not have endometriosis, because there was no pathology report to go with the lesions. And the reality is that sometimes you might see some over-exaggerations of the severity of the disease. And so obviously, if the patient were able to provide you with the pictures of their surgery, that is way better than the actual op report.

And also, that you have to think about when is-- when you do have endometriosis that is diagnosed on laparoscopy, you have to ask yourself is it incidental-- coincidental? It just happened to be there, but had nothing to do with patient's pain. You have to think just because someone has endometriosis doesn't mean endometriosis is the cause of the patient's pain.

That's why it's very important for the surgeon or the gynecologist to really know how to do the exam, because if you do the exam-- Patient have focal uterosacral tenderness on the right side. And you do laparoscopy. You find endometriosis on the right uterosacral ligaments. Then, it's obviously very, very indicative that's the reason for their pain. But if you have patient with predominately left-sided pain, and all you see is the small endometriotic implants on the right side, chances are the endometriosis that you discovered may be incidental or coincidental.

And then, the other factor to consider the patient with multiple surgery for pelvic pain endometriosis that you have to look at the severity of disease. Is it because they have multiple surgery, because they have severe disease that there are a lot of disease being left behind? The techniques used-- whether patient just have a superficial ablation of the lesions versus a deep excision endometriosis with extensive retroperitoneal dissections.

And how the patient responds to the surgery. Certainly, the patient may have also have placebo effect with a laparoscopic surgery or any surgery for pelvic pain. And the other thing that you have to look into is the experience and the credibility of the surgeons who perform the surgery.

And also too is that sometimes we may see patients who have multiple surgery and who have become very desperate and just want to have everything removed. And sometimes, reality is that the patient never really have adequate conservative surgery for their disease, just because they have to undergo so many surgeries. At that point, they already give up basically. And thinking that hysterectomy would be the solution to their problem.

And at times too is that in those patients who have multiple surgery for pelvic pain endometriosis, we frequently doubt those patients, whether their pain is real or not. And that's why the history and exam become very, very important.

So there is a term I use to describe the exam when I say the patient exam is very authentic, meaning that it's that you when you touch-- you do a systematic exam and you touch anterior vaginal wall, levator muscles, everything seems to be fine. There's no pain. And when you touch the uterosacral ligament, all of a sudden, they withdraw from the table. Their eyes roll back. This is what I call visceral exam. And the exam is very authentic.

So despite having multiple surgeries in the patient's history, it doesn't mean that the patient would not be helped by another surgery. Chances are that the previous surgery may not be adequate or was not done in a way that would help the patients. So just because the patient had multiple surgery doesn't mean they are not candidate for further surgery. So authenticity of the exam will actually give you the confidence that what needs to be done next.

When it comes to the exam, there are things that you would do for any gen exam. Obviously, inspect the-- you observe the patient, their behavior, their expressions, their mood. That's very important. Obviously, if patient's in severe pain, you can tell in their face, in their body language. You do a abdominal exam with inspections, with palpitations.

The speculum exam, at times, patients with severe endometriosis invading into the posterior vaginal fornix, you'll actually be able to see endometriosis in the posterior vaginal fornix. And in some patients, the cervix could be deviated to the right side or left side because of the retraction caused by the fibrosis from the endometriosis. That will let you know.

Also too, in the patient with previous C-sections, their cervix may be pulled up anteriorly behind the pubic bone and that you have difficulty visualizing with speculum. Those are the kind of things that you would look for on speculum exam. And I start the exam by using one finger. I will palpate the anterior vaginal wall.

So if patient have bladder-based pain, like interstitial cystitis or even acute bacterial cystitis, they would have anterior vaginal wall tenderness. And I'll palpate levator ani muscle to look for any kind of increased tensions of levator ani, as well as any kind of trigger point pain on the levator ani muscles or obturator internus muscle. Those are the kinds of thing I do with one finger. And then, I use one finger to palpate the posterior fornix as well.

And we'll do a bimanual exam mostly to look at the size of the uterus, and as well as the adnexa on exam. And lastly, we do the rectovaginal exam. And a lot of people ask me is this how do you do a rectovaginal exam? Unfortunately, this is a skill set that's not frequently taught during residency. So most people when I do a rectovaginal exam, they put their index fingers into the vagina and the middle finger in the rectum. And most people don't know what to do with the finger in the rectum.

So one of the things that I teach the residents or my fellows to do is have the rectal finger point anteriorly towards the cervix, because you can localize the cervix with your finger in the vagina. Your rectal finger can palpate the cervix, you swipe one side or the other, because that's where the uterosacral ligaments insert to the posterior aspect of the cervix.

And by palpation, by finding the cervix, you'll be able to find the uterosacral ligament. And you can elicit any focal tenderness in the area. You'll be able to palpate the cul-de-sac for any tenderness in the area. In patients, obviously, if you feel nodularities in those areas, whether the nodule into the vagina, in the rectovaginal septum, or in the rectum, those are the signs of [INAUDIBLE] endometriosis. And then perhaps, if you are not trained to deal with excising those deep disease, then the referral to your colleague may be helpful in those patients.

So typically, for the most part, in terms of imaging, typically ultrasound is not particularly helpful. The majority of patients with endometriosis will have normal ultrasound. So on exam, you would actually just feel focal tenderness in the cul-de-sac or uterosacral ligament, without feeling any nodularities. So by the time you feel any nodularities, patient likely have very severe disease.

So if you do an ultrasound on the patient who has endometriosis, majority of the patients will have normal ultrasound. Obviously, a patient who have Mullerian anomalies, unicornuate uterus, bicornuate uterus, [INAUDIBLE], those patients are at increased risk of endometriosis due to retrograde menstruations.

In a patient with persistent debris filled ovarian cysts, chances are those patients may have endometrioma. If patient have endometrioma, they are five times increased risk of obliteration of cul-de-sac and bowel involved in those patients. So whenever you see a patient with possible endometrioma ultrasound, that should be a red flag that a patient would have very severe endometriosis.

And then, if you are not comfortable with severe endometriosis, obviously, patient may end up with conversion or that you-- the patient may end up with an extra surgery they don't need. So sometimes, if you see endometrioma on ultrasound, that patient may be better off with a referral to your colleague.

And the rectal ultrasound is something that we do in patient we have special concern for bowel endometriosis. I do endorectal ultrasound mostly in patients who have hematochezia. But on the exam, I do not feel any nodularities on exam. And perhaps, the nodularity is higher than where I can reach with my finger.

So endorectal ultrasound will allow us to detect any kind of invasive rectal nodule, endometriotic nodule into the bowel in those patients. So it's basically ultrasound probe that's attached to sigmoidoscopy. So they usually, you would get a sigmoidoscopy and ultrasound all at the same time.

Most of the time, I use MRI with rectal and vaginal contrast. For me, it's the most useful imaging modality I use, because it provides me with the perspective of location of the disease and its proximity to different structures. And if you have a center that is-- have been doing a lot of MRI for endometriosis, it's very, very reproducible. So it's my preferred modality.

There are centers in the world that use vaginal ultrasound to diagnose some of the deep [INAUDIBLE] endometriosis. But it is very, very operator dependent. So those vaginal ultrasound for-- for deep endometriosis, it's less-- it's very, very operator dependent.

And we have worked with our radiology department here at Magee Womens Hospital for many years. And we have a bimonthly MRI conference for endometriosis with our radiologists. So we learn from each other. So it's a very, very useful modality for you to use. The problem with MRI is that if you have higher bowel disease above the cervix, that disease can be missed at times, because the rectal contrast does not go up high enough to help you identify a higher disease in the rectosigmoid colon.

And so ideally, you want to gather as much information as possible on your patient regarding the severity of the disease beforehand so that you will be able to provide them with the best informed consent process. So it's really the opportunity to set expectation of the surgery and then also give you the opportunity to readdress objective and priority of the surgery.

For example, if the patient, their priority is fertility, they want to be able to get pregnant. And then you want to discuss with them whether they want how much of-- if they happen to have severe endometriosis involving the bowel, whether they would like to, if they have bowel endometriosis, addressed at the same time. Or if pain or bowel dysfunction is their priority, then people might have a different objectives to what they want to achieve through surgery. So it's very, very important to address those issues with the patients.

And be very upfront with the risk with the patients. So for patients who have bowel disease or bladder disease, you have-- they have to be aware of the risk that's involved with doing surgery in those different structures. So that when they are completely invested in their own health through proper informed consent process by fully-- be-- by fully aware of the risk involved with the surgery, that allows you to be able to do the best surgery for the patients.

And so also, the more you know about the patient's pathology, that you can get your general surgeons, or your colorectal surgeon, or your urologist involved early in the process. So you don't get a habit of calling them for help in the middle of the surgery. And that your general surgeon, or your colorectal surgeons, or urologists never met a patient ahead of time, and that is going to impact on their care.

And also too is if you involve them early, and you have been doing surgery with them over time and over the years, then you will begin to get their trust and respect from the-- your general surgeon and urologist colleague. And also too, in many ways is you if you begin to do more of this type of surgery and having your GI and GU team to back you up, allow you to push your limit a little bit more.

You may be able to do a little bit more lysis adhesions, enterolysis, urethrolysis when you have those back up for you. And in the end, if you-- the people, if you get them involved early, they have met the patients. And it's I think for the most part, they are more willing to help you. And then, that you would actually learn from them as well.

So in conclusion is that good surgical care for endometriosis starts way before the operating room. For the audience who do not do surgery for severe endometriosis, it's also a very good way to-- this-- hopefully, this presentation would help you identify those patients not may have underlying endometriosis that may have been undiagnosed, be able to refer them to the proper specialist.

As well as to avoid doing surgery for different indications and then avoid having a surprise in the operating room that the patient end up having severe endometriosis, and you did not expect that. So by having the ability to do the exam and the history I just described would help you to minimize those surprises.

Thank you for your attention.