

### Transcript Details

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### Infertility: Current Testing and Treatment Methods

Narrator: Welcome to Conference Coverage on ReachMD. The following activity, titled "Infertility: Current Testing and Treatment Methods" was recorded at Omnia Education's Women's Health Annual Visit.

Your host is Dr. Andrea Singer.

Dr. Singer:

According to the US Centers for Disease Control and Prevention, infertility affects over 6 million women in the United States. There are many options available for the couple with infertility in terms of treatments and even if you are not a reproductive endocrinologist, there is much that you can do for the infertile couple that you might see in the office.

I am Dr. Andrea Singer and joining me is Dr. Stephen Cohen, Faculty at SUNY Upstate Medical School in Syracuse, New York, and today we will be discussing infertility.

Dr. Cohen, welcome to the program.

Dr. Cohen:

Thank you.

Dr. Singer:

To start, can you provide the current definition of infertility as it relates to women's age and then give us a sense of when providers should start thinking about starting an evaluation?

Dr. Cohen:

The definition of infertility hasn't really changed over decades and decades, and the value is having unprotected intercourse, exposed becoming pregnant for a 12 month period of time, because that was convenient to know that. So, the definition has remained the same. What's changed is when we begin to work people up regardless of what the definition is. And age impacts it, because if you are under 35 then we usually wait a year, because most patients, 85% of couples will conceive a pregnancy within a year if they wait. You've all had the patient and it says infertility on the schedule and you say, "Well, how long have you been having intercourse, unprotected intercourse?" And they said, "Last month, and I am not pregnant. What's wrong?" So, we've all had that, but basically, we ask them to wait a year. If they want a workup before that, obviously we will do what they ask sometimes. If they are 35 or older, we start working up at 6 months. And everybody does now because we know that old biological clock is ticking and we don't want them to waste time. .

Dr. Singer:

What history, evaluation or testing is recommended before referring the patient to a fertility specialist? In other words, what should we be able to do and would be appropriate for us to do in the office before we send them to you?

Dr. Cohen:

That's an interesting question. It all depends on who you are and what you do and what you like to do. So, we are not saying in any way that you all should workup the infertile patient. If you are just not comfortable or you don't have the time, or for whatever reason, you don't want to work them up. But, if you would like to work some of these patients up, it's very easy. Infertility, the science of infertility, is incredibly complex. The clinical practice of infertility is relatively easy and a lot of common sense. So, everybody can really get involved who is any sort of provider at all. And so, basically, it all starts with the history. And most of the time, like a good quarterback, you can tell what to do before you call the play just by looking to see what is happening. By the time you finish the history you have a pretty good idea what the cause might be. And we've gone so far, we gone so far into testing, sometimes we lost the ability to talk to the patient. There was a tombstone down in Cape Cod that gave the guy's date of birth and date of death, and underneath it said, "See I told you I

was sick." So, you need to listen to the patient to hear what they are saying. So, we ask them things like, "Well how long has this been going on for? How long have you not been able to conceive?" Someone who says, "Gee, I haven't used contraceptives in the last 10 years and I haven't gotten pregnant." Ah, maybe something is wrong, okay? But if it is the last 10 minutes, maybe not so much, okay? And then we ask them have they been pregnant before? Because if they have been pregnant before and nothing dramatic has happened that's a better history than if they... "Oh, I've never been pregnant." You don't know what their fertility status is. We ask them about contraception. We ask them about their coital history. You know, if they have a menstrual period every month, but they have intercourse every year, could be a problem. So, coital history is important. Medical problems, obviously you all know that, you know thyroid disease, etc. Previous surgery, meds, etc. Smoking and drinking. So that's the history that you can almost know what you are going to find in these patients.

Dr. Singer:

Are there testing that should be done?

Dr. Cohen:

Let me tell you about some of the things that have changed, because a lot has changed over the last 4 years about what we did. We used to do a basal body temperature, BBT, okay and now there is an app for that, obviously, and you can see the little rabbit jump around when it gets near fertile time and then go down. And we used to have them take their basal, don't get out of bed, put your thermometer in your mouth, read your temperature, record it every morning, and watch it, it should be biphasic. It drops, that's when you ovulate; it goes up and that's when, after ovulation. If you do that, you are probably ovulating. Well, I think that helps some people get pregnant and probably hurt 10 times more people trying to get pregnant, because everybody waited for the temperature to go up, because they didn't see the drop. You didn't see the drop until the temperature goes up and that would be like, how do I get to the stop? And you would say, "Well, watch where I get off the bus and then get off the stop before me." Oh, okay. How do I know that? So, we don't do BBTs anymore. What else don't we do? Post coital tests. We don't do post coital tests any more, with rare exceptions, So, with a patient we say go home, have intercourse, come on in and we are going to check your mucous and make sure the sperm is swimming in that cervical mucous. We don't do that anymore, because it doesn't really help us and we are probably going to bypass the cervical mucous. What about the endometrial biopsy? For those of you that know the Journal of Fertility and Sterility, the most read OB/GYN journal of all. The lead article in the very first edition, was the endometrial biopsy for luteal phase defect. We don't do that anymore. It was inconsistent, it wasn't helpful and it didn't predict who was going to get pregnant. And what about the gold standard, laparoscopy? When I was resident, if you weren't fertile, you got a laparoscopy automatic, to look for endometriosis or pelvic adhesions. Well, endometriosis may not cause that much infertility and treating it may not help at all. Bu, basically, so laparoscopy has gone from doing everybody to doing two-thirds of the patients, to doing one-third of the patients and it is falling rapidly. So we really don't often do laparoscopy in the patient has a normal exam, normal ultrasound, even though she may have stage 1 or 2 endometriosis.

So, what do we do, because now we have eliminated about everything we used to do? So, we do labs. Let's make sure their basic labs are normal. just with targeted labs, and those would be CBC, CMP, thyroid prolactin, and maybe a FSH in these patients. we always get an offer, or try to get a semen analysis because you never know who's got sperm and who doesn't have sperm, and even those who had a vasectomy but their partner doesn't know they've had a vasectomy—we've seen that on occasion. and we do a histogram usually on these patients to make sure they have patent fallopian tubes, and that's basically the first stage you workup. You can do all that in your office, most of that. You can order the semen analysis, get the labs. The rest we are not doing much anymore.

Dr. Singer:

So, what therapies and treatments can be offered to the patient that all of us might be able to do before we refer to a reproductive endocrinologist?

Dr. Cohen:

the first thing you want to do is sort of decide, are they ovulating or aren't they ovulating? Once you know the semen analysis is normal and either you know their tubes are open or not, are they ovulating or aren't they ovulating? If they are not ovulating, you have a period sometimes it is a month, sometimes it is 4 months, you know she is probably not ovulating. So, you want to make that first decision right there. If they are ovulating, that's another interesting area we can get into if we have time, but basically, if they are not ovulating, you want them to ovulate. So, without question, and how do you get them to ovulate? Well, basically you can use a drug, , clomiphene. Basically it is 50 mg and the package insert will say days 5 through 7 of the menstrual cycle and you can stop them if they have a period once a year, you can give them some progesterone as well. Stop them on days 3 through 7. It says 5 through 9 on the package insert. Have them take it days 5 through 7, 1 tablet a day, 50 mg. It's dirt cheap. They almost give it away free. Okay, it's been around for 60 years and it is incredibly safe and it usually will get them to ovulate. Now, once that happens, and they start to ovulate. You can just watch, if you are in an office that doesn't have a lot of facility, doesn't have ultrasound, you can just watch and see if their cycles get to be monthly on that dose. If they do and they don't get pregnant, don't increase the dose. We don't increase the dose because they fail

to conceive. We increase the dose if they fail to ovulate, okay? Now we usually get an ultrasound day 12 or 13. See if there is a follicle. If there is a follicle, they probably are going to ovulate. You are looking for an easy ultrasound that every ultrasound tech in the world can do, and you want a 2 cm follicle, 22 mm or somewhere in that range. And so, if you are just a private office that doesn't have a lot of facilities in treating infertility patients, let them try that for a month or two. Even with ultrasound each time you give it. If they don't ovulate, they don't form a follicle, nothing more than a centimeter, then up the dose, double it. Go to 2 tablets, days 3 through 7. Just get them to ovulate and see if that's all they need, You could, if you wanted to depending on your level that you want to get into this, have them prepare an intrauterine sperm sample in the lab for you. Give it to you and slide a little catheter in the cervix and place it there at the time of ovulation. So, you can do that too.

Dr. Singer:

So, in the last minute or two, can you talk about perhaps the older patient who is getting concerned because of her age, but she is not ready to become pregnant yet? What options are out there for her in terms of preservation so to speak?

Dr. Cohen:

We've come a long way on what we do with the patient whose biological clock is ticking. The American Society of Reproductive Medicine, ASRM, has really made a push for the last 5, 6 years on getting the information out there that you can't forestall pregnancy forever because it may not work eventually. Although they put a lot of money and effort into this, I haven't seen much change. So you get patients who are very knowledgeable and follow this and are worried they are not going to get pregnant and then others who come in and they are like 47 and they say, "Gee, I think I would like to get pregnant." And you say, "Hmm." You say, "Well, your eggs are not going to work too well." "Well, what do you mean?" I say, "Well, you are 47." And they say, and probably you see it even more out in California, "But I look 25."

(Laughter)

I have a personal trainer. I have 6-pack abs. And I say, "But your eggs, they are 47."

(Laughter)

And it comes like a shock to them. Well, look at all these movie stars they are all having babies at 50. But they are not their eggs. "What, whose eggs are they?" I say, "Well, I don't know, but they are not their eggs." Okay, they are donor eggs. They have to understand that the fertility dropped dramatically after 30 basically, 35. It starts to drop about 25% between the next 5 years and 47% after that, 78% after that. Now, we used to think, a lot of people think, that if you draw an FSH level days 1 through 3 of the cycle and it is high, that it correlates to not being able to get pregnant. "Oh, you got bad eggs." They have been in the supermarket too long. They are too bad. So, and we used to then say, "Oh, wait, we've got a better test than FSH." So we call that ovarian reserve. We have got a better test that called AMH, anti-Müllerian hormone, AMH. That became the big thing the last 5 years because it is not cycle day-dependent. You can draw it any day in the cycle. You don't have to have her come in. If the AMH is less than 1 or the FSH is more than 10, you've got old eggs. It turns out it's not helpful. It's not helpful and had nothing to do with conception. Who would get pregnant percentage wise and who wouldn't. They did excellent studies on both of these drugs. What they do correlate with is your potential to get pregnant down the way, how many eggs you have left and what your response is going to be when they shoot you with gonadotropins for an IVF cycle. You will have many more eggs if you have good numbers for an IVF cycle. It has nothing to do with the individual cycle and whether you are going to get pregnant or not. So, we don't have a good test of the quality of the egg. We have two good tests on the number of eggs that you have left, but not on the quality of those eggs. So we fall back to age. We just go on a pattern. This is the age, this is your percentage, this is going down, this is not only getting pregnant but having a successful baby, so not a miscarriage or termination, and then, of course, avoiding genetic defects in these infants as they age as well which cause problems. So aging is extremely important and it defers back to age because all the fancy tests we have, follicular counts and other things, and again, I am not going to get into. It goes back to age. It's your age.

Dr. Singer:

So, lots of interesting thoughts and on that note, I would like to thank you. Thank you Dr. Cohen for joining us today.

Narrator:

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Thank you for listening.