Fibroids and Infertility - Diagnosis and Treatment

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Dr. Carter: Hi, I'm Dr. Jim Carter. I'm here in Montreal at the International Society of Gynecological Endoscopy meeting, and I'm with Dr. Charles Miller. Charles is the board member from the United States with the International Society. He's here at our meeting presenting his work on patients with problems with fertility and fibroids. Can you tell me where your practice is, Dr. Miller?

Dr. Miller: Yes, Dr. Carter, I practice in metropolitan Chicago. I'm with the group called the Center for Human Reproduction. Actually, Jim, we are the largest U.S. group of reproductive endocrinologists having members throughout the United States.

Dr. Carter: Dr. Miller, you presented some excellent data on your results treating women with fertility problems who have fibroids. Can you talk to that issue?

Dr. Miller: You know, it's interesting, Jim. We've been at this meeting and we've seen a cadre of different types of treatments for the uterine fibroid, whether it's submucosal fibroids - fibroids inside the uterus - or all the various ablation techniques that can be utilized. I know both of us have utilized bipolar instrumentation for patients to remove the fibroid and to leave the cavity intact. We've also seen a number of instruments that are used for the purpose of dealing with bleeding, menorrhagia and uterine fibroids, such as embolization, myolysis and cryomyolysis techniques. But ultimately, when we're dealing with fertility issues, we have to be able to remove the fibroid, either inside the cavity - and I already mentioned VersaPoint being able to do that - or also utilizing instrumentation to remove both intramural and subserosal fibroids.

Dr. Carter: Your experience has been long and very successful with treating women with fertility problems who have fibroids. Could you describe your work-up for that woman?

Dr. Miller: Yes. It certainly is a fairly conventional work-up. We see these patients and initially we take a thorough history, then perform a physical examination. I'm certainly interested in their bleeding patterns, how long they have been infertile, etc. We certainly want to look at other factors and explore those issues, but ultimately, we examine the patient and find out the size of her uterus. Then, through an examination where we look for a hint that there might be a problem in terms of fibroids, or through her history, heavy bleeding with menses. Ultimately, we will often bring that patient in for an ultrasound to look at the fibroid and at the uterus. Potentially, we could do a hysterosonogram, a hysterosalpingogram, and even a hysteroscopy to help us locate and map out the fibroids. I'm glad you asked that, because one of the essential things that is important when dealing with the patient with uterine fibroids - from a laparoscopic stand point, as well as hysteroscopic stand point - is to know the size, the number, and location of those fibroids.

Dr. Carter: Yes. It is very important point to know the size, the location, and the number. Now let's say you have a patient and you've done her hysteroscopy diagnostically, and you find she has a fibroid that's in a position you feel needs to be removed. I know you are one of the early pioneers in the resectoscope procedure. Could you describe your procedure as to how you remove that fibroid so simply, using your resectoscope?
"At this point, there are two ways of dealing with the fibroid in an intrauterine type of setting, a submucosal setting inside the endometrial cavity. The time-warranted procedure is to go in and to dilate the cervix and place an instrument - which has really been modified from the urologists' - that has an electrosurgical loop, or a hot loop that ultimately allows us to peel off the fibroid. When we started doing these resectoscopic procedures we used to talk about shaving off the fibroid to the level of the myometrium, and I think many of us who are very aggressive and very interested in this area, per say, realize that you have to try to get as much of that fibroid out as possible. Otherwise you'll quickly be in the same situation that brought you into the O.R. in the first place. So we will actually come into the cavity of the uterus and shave that fibroid into the myometrium in order to be complete as possible. Obviously, when we do that, when we're coming into the wall of the uterus - or the muscle of the uterus - we want to have a safety zone. So with this kind of case, we'll put in a laparoscope at the same time in order to observe."

"So a patient with a deep fibroid, or a deep myoma seen at hysteroscopy may require a laparoscopy for you to complete the hysteroscopic procedure."

"You are absolutely right, even if we switch over to bipolar instrumentation. Yes, both of them, if we're going to start coming into the wall, or into the myometrium. Yes."

"Now, you mentioned a bipolar instrument - the VersaPoint. One of the big complications that we have to watch for when we do resectoscope procedures is what we call 'hyponatremia,' or low sodium. Using bipolar current solves that problem?"

"Yes, it does, to a degree. You still have to monitor the patient, where this is still a physician doing the surgery. But the bottom line is that when we deal with bipolar current, we have the opportunity to use a saline environment, and with that saline environment we don't have the tremendous risk of hyponatremia that we've had in the past, as you well know, with the resectoscope. So we can use more fluid during the procedure and have a much greater safety zone. Is it still important to manage that patient, to watch what the input is, and to monitor what output is coming out of the fluid? Absolutely. It's just a safety net that is wider and tighter."

"The reason is, as we know, that when we use saline we only have to watch for fluid overload. But because saline is, of course, a physiologic solution, and bipolar works in that solution with this system. So you no longer worry about the sodium, and that's helpful."

"It's been a real advantage to us. Interestingly enough, here at the ISGE Congress we've had the opportunity to see the next generation of the VersaPoint, which will actually allow us to deal with a much larger fibroid in a very, very efficient manner. So these are some of the advantages of coming to a place like ISGE, to have an opportunity to see the latest development, and now to incorporate that development very quickly into our practices for our patients."

"I'd like to ask about your laparoscopic experience, because I've seen your work and I've heard your lectures. You're one of the early performers of laparoscopic myomectomies, especially using ultrasound techniques. Could you talk about your experience with that? From what I've seen, it's looked like bloodless, clean surgery in your hands, and it's very impressive."

"I've been accused by some of the English physicians as having performed cadaver medicine because we're able to keep our blood loss so low. I think it's a combination of things. Number one, as we talked about, we map out our fibroids very, very closely, so we know where we're going to be making our incisions. The second thing is that we do use a vasopressin solution to cut down blood loss and to constrict the vessels during the procedure for a short period of time. Finally, we are using instrumentation that really has been developed to provide us very quick hemostasis without the
tremendous depth of penetration that we see with other instrumentation. What I think we've been able to take away from this is not only a safe technique, but also a very, very successful technique. As you know, we reported on our statistics a couple of years ago and our pregnancy rates and our delivery rates really were at the very pinnacle using these types of techniques. Actually, they were at the very pinnacle of what was previously recorded in open laparotomy procedures, so I think if we adhere to some of the same surgical principles - repair the uterus in multiple layers and utilize instrumentation that will minimize the risk of damage to the normal surrounding tissues - then, ultimately, we can do every bit as well, if not even better, because the risk of adhesions with open laparotomy is even better from a laparoscopic route."

**Dr. Carter:**

"So women who have problems with fibroids, or problems with their myomas related to fertility, can undergo hysteroscopic and laparoscopic procedures to restore fertility. In your hands, you've been very successful at that."

**Dr. Miller:**

"You know, Jim, it's not only in my hands. I've just had an opportunity to review literature in a debate that we're involved in the Chicago area. My opponent was an infertility specialist from the Atlanta area, and in our course of discussion, what came out was that we now have instruments that allow us to be successful. The woman who has a submucous myoma, in particular, or a fibroid inside the cavity of the uterus, but also the woman who has a fibroid that is near the cavity - not even impinging, not even pushing on the cavity, but near the cavity - can be impacted adversely with uterine fibroids and can be treated successfully and safely with the laparoscope."

**Dr. Carter:**

"Thank you very much, Dr. Miller. This has been a very edifying session, and the people of Chicago are fortunate to have you there."

**Dr. Miller:**

"Thank you, Dr. Carter."

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