

Chapter 8

The Moment of Truth

“In any moment of decision, the best thing you can do is the right thing, the next best thing is the wrong thing, and the worst thing you can do is nothing.”

- Theodore Roosevelt

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I refer to this point in the surgery as “The Moment of Truth” because this is the point where the surgeon should correctly ascertain the best way to complete the procedure. There are a number of factors that are going to tell you if this procedure can be completed by single-port laparoscopy, multi-port laparoscopy, or, in rare cases, by laparotomy. You're going to need to look at all of these factors and consider the probability of success for each.

It will also be important to consider what your individual strengths are as a surgeon. In addition to thoroughly surveying the abdominal cavity from the laparoscopic approach, there are three quick maneuvers that will give you a little more information as to how much trouble you are in. First, light the vaginal ring and gently move it to see where exactly the plane is. Next, gently move the uterus with the uterine manipulator and see how much mobility the uterus has. Lastly, gently challenge the anterior adhesions with the laparoscope, if necessary. All of these techniques will be described below.

First of all, it is critical for you to think about what it is that you are removing, meaning what really needs to be removed, and what the patient would tolerate being left behind if it meant a more minimally invasive surgery. Hopefully you've discussed with the patient all the different possible scenarios, and you'll feel as if you have a good grasp of what the patient would want. If you can complete the hysterectomy laparoscopically but you're not sure you can remove that ovary, would the patient really want you to remove that ovary? Does she have a history of ovarian cancer in her family? Is she having this surgery in the first place for pain on that side? Clearly, it is critical to consider all possible scenarios and counsel the patient appropriately prior to putting them to sleep. It would be quite tragic if you felt you had to cut the patient open for an ovary that you later learned they would have preferred left

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behind. The applications of this train of thought should extend to all manner of laparoscopic procedures in gynecology, not just this hysterectomy technique.

Next, let's look at what adhesions are in the way. What do you really need to go through in order to remove the uterus and the other organs we need to take out? Are the adhesions really blocking the path, or can they be pushed to the side? Am I thinking about doing more surgery than I need to? What is inside those adhesions, and am I sure I know that? Can they be safely cut or is there a chance they contain bowel or other organs I don't want to damage? A quick move for gaining a little more insight may be to place your 5 mm laparoscope a little deeper into the abdominal cavity so that you can visualize the abdominal walls a centimeter or two away from the front scope. Next, ignore the wall as you quickly do a 360 degree panoramic rotation around the abdomen and see what adhesions are still in place after you have made the full circle. Clearly, you do *not* want to put too much pressure on the laparoscope if adhesions have your scope stuck in place, at least not at this point in the procedure.

Next, try to visualize the ring of your vaginal manipulator. If you are using the Fournisee™, light it up and see where the ring is. All other manipulators will require some wiggling at this point to see how much of the outline of the ring you can visualize. Can you visualize it at all before you've gotten it any pedicles? Is the posterior cul-de-sac completely obliterated, or can you see a safe plane at the bottom lip of the vaginal manipulator ring? Can you manipulate the uterus to see more of it? Look at the interface of the bladder with the ring. Can you see where the bladder stops? If you're not sure, you may want to fill the bladder by retro-filling with saline using your Foley catheter. I can't tell you how many times this technique has saved me from creating a bladder flap that wasn't even

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necessary, in a bladder that was enough out of the way to just complete the hysterectomy without dissection. The bottom line for your dissection is that if you can get to the ring safely you can finish the procedure.

Lastly, let's look at the size of the uterus. Can it be removed vaginally without morcellation? If I do need vaginal morcellation, am I skilled enough at vaginal morcellation to complete this? If I poke at the uterus does it seem soft? Has the patient had a course of luprolide™ that has made it rock-solid? There is little point in performing a complete hysterectomy laparoscopically if you then cannot remove the uterus without laparotomy, but there is also a great benefit in improving your vaginal morcellation techniques, even at the expense of operative time.

Now, consider whether you can complete this hysterectomy with a single port technique. If you cannot, can you complete it with a multi-port technique? Also, if you feel so inclined, there is nothing wrong at this point with concluding laparoscopy and performing a vaginal hysterectomy as you were trained. As you become more accustomed to this technique, the quick assessments of the abdomen, uterus, ring and adhesions become part of the first steps of your procedure. You may even wish to take down a few easy first pedicles in order to test your assumption. We have all had the experience of being surprised at how easily some hysterectomies go that we originally thought to be quite difficult, and how quickly “gimme” cases can turn into hysterectomies that we have needed to open or came very close to needing to do so. I am of the mindset that a true frozen pelvis, as well as a completely obliterated posterior cul-de-sac, will always require a laparotomy. I am generally able to avoid laparotomy in most patients, but always keep in mind that the “good old bikini cut” is far preferable to any patient than a bladder, ureteral, or bowel injury. Remaining

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chapters will focus on assuming you have gone forward with the single-port laparoscopic approach as described.

I did not mention the type of trocar preferred for this entry, as any type of 11 millimeter blunt trocar can be used. I am quite fond of the Ethicon™ trocar as well as the Covidien™ trocar. The Applied Medical Trocar™ is a less desirable product as the plastic point of the trocar does not make sense for entry at the abdominal cavity and does not include any type of plastic "blade". Any blunt trocar, including a reusable trocar, would be acceptable for the purposes of this technique.

If you have surveyed the abdomen and are going forward with a single port hysterectomy, the next step is to remove your blunt trocar and insert the introducer Ring of the Olympus Tri-Port™ device into the abdominal cavity. Depending on how thick the abdominal wall is, the ring may be placed through the footprint of your 11 mm trocar Port manually, or you can use the introducer that comes with the Olympus Tri-Port™ device to inject the base ring into the abdomen. After you have removed your 11 mm blunt trocar, depending on the type of trocar utilized, your incision will either be almost exactly the same diameter as the introducer on the tripod, or slightly smaller. Either way, it is not important because all that you need to do at this point in the surgery is to match up the introducer to the incision and inject the contents, which contain the plastic base ring and some of the plastic sheet of the Olympus Tri-Port™ device, into the abdominal cavity. It is a rare complication for the ring to lodge between the peritoneum and the fascia, and if it does it is fairly easy to withdraw the ring using the collapsible strap and then deploy the ring a second time. If too much time passes and the abdomen begins to desufflate, you may need to replace the 11 mm port to re-insufflate the abdominal cavity and make another attempt at placing the Olympus Tri-Port™ device.

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From this point, once you or the introducer has placed the ring in the abdominal cavity, you will firmly pull up on the sleeve, trim the sleeve and install the triport device in the normal manner. The only exception, of course, is that the device is now installed through an 11 millimeter incision created by a blunt laparoscopic trocar, instead of the recommended size which ranges from 1.5 to 3 cm.^{32,33}

So what is our thought process behind using only an 11mm incision and creating that incision using an 11 mm blunt trocar as opposed to creating the incision directly with a scalpel or using a bladed trocar? This is a difficult question. I'm not going to dive into a debate going over all of the literature of laparoscopic entry and the different trocar port sizes, and the respective necessity to close each individual port size, whether it be bladed, blunt or “step-up,” with suture in order to avoid port-site hernia. There has been a lot of data released lately about single-port procedures performed with a robot and an abysmally high complication rate (**5.5% omg!**) with regards to umbilical hernias following oncologic procedures including hysterectomy.^{34,35}

Unlike the common medical journal article, I have a more effective tool to make my point with. The most important and easily accepted piece of information is the one that builds on information the surgeon already knows to be true. There are many ultra-high-volume, minimally invasive laparoscopic surgeons in the United States.³⁶ Most of these are very comfortable using at 11 mm blunt trocar port, and the data is controversial about whether this port needs to be closed.^{37,38}

Personally, I have performed over 3,000 laparoscopic surgeries using the port and have never had an umbilical port site hernia. Although it is my practice to attempt to close the fascia from the abdominal approach

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(not laparoscopically) I would assume that at least one of these closures would have failed over the years if the closure was really necessary, especially in light of my less-than-stringent rules for closure of the 11mm bluntly created incision, which will be further discussed in Chapter 15. Therefore, in my mind, at 11mm and blunt we are always safe.

For ultra-high-volume surgeons, it's not just the avoidance of the port site hernia, it's also our comfort with the recovery from incisions this size. Ultra-high-volume minimally invasive surgeons are very, *very* used to performing 10 or more surgeries per week, and having little or no complications. Patients go home with holes no bigger than 11 mm and it's essentially unheard of for these incisions to become infected. Even in uncontrolled diabetics and patients with immunosuppressive disorders, these tiny incisions getting any type of infection postoperatively is essentially unheard of.³⁹ I believe this argument makes the most sense to high-volume surgeons, since this procedure is geared to those very same ultra-high-volume laparoscopic surgeons.

Therefore, I humbly present this technique which will allow us to perform a complete laparoscopic hysterectomy, the most common major surgery we perform, through the very same incision that we have become so accustomed to for our other “bread and butter” laparoscopic surgeries. I will admit that, initially, I was suspicious about the reproducibility as well as the success of this procedure, but now that I have performed dozens of these procedures I am convinced that this technique is a very optimal way to perform a hysterectomy with minimal recovery. Further, when this procedure is used with a combination of spinal and general anesthesia, the result is an incredible, ultra-minimally invasive technique which

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literally removes the majority of postoperative pain and suffering from a major surgery that many women need.

This brings us to the main impetus for my technique, as minimally-invasive surgeons that do extremely high volumes of surgery, hysterectomy seems to be the one surgery that we commonly lose sleep over. Following hysterectomy, we commonly worry about the ureters, lose sleep over possible complications, and are awakened in fear at 3:00 AM by nurses asking questions or needing orders on patients that are staying overnight. My overall goal with this technique is to reduce that fear and to bring this very common procedure firmly back into our toolbox of "everyday" procedures we can perform on an outpatient basis, without any fear of serious complications.

Now, if you've installed the Triport™ in the 11mm incision, congratulations! You have now completed the preoperative setup for the Single Port Advanced Laparoscopic Hysterectomy.

Let's move on to the good stuff!

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