

Chapter 9

Choose Your Weapons

“A man can never have too much wine, too many books, or too much ammunition.”

- Rudyard Kipling

Laparoscopic Single Port Hysterectomy

So now you've got your flexible Triport™ installed in your 11 mm umbilical incision and it's time to select your weapons. First, let's look at the possibilities. An 11 mm incision, as a perfect circle, provides approximately 95 square millimeters of space. Each 5 mm instrument you place through the incision takes roughly 20 square millimeters of space and, because these are solid instruments, not liquid, you have to allow for room around adjacent objects as they will not change their shape. One advantage, however, is that the incision itself can change shape. The diameter of the incision should stay the same (no stretching!) whether the incision is pulled to a perfect circle or stretched more front to back or side to side. Therefore an oval configuration or more of a triangular configuration will usually be the shape the incision is held to, all while keeping the same diameter. As a result, even though 3 circles each having a 5 mm diameter cannot fit inside of one circle with an 11 mm diameter, you can pull the diameter into a more triangular shape to accommodate all instruments without the need for extending the diameter.

At this point, I'll give my recommended initial configuration. I would recommend a 5 mm, 30 degree laparoscope, unless you do have an articulating scope available. There are several excellent articulating laparoscopes, and if you have one available I would recommend using it. Always take every advantage you have at your disposal. This technique, however, was designed with the idea that only a 30 degree 5 mm classical laparoscope will be available, in order to make the technique as widely reproducible as possible. With the exception of the \$250 single port device that can be purchased online,⁴⁰ I will wager that all of the instruments required to perform this procedure are found in 99% of hospitals with operating rooms or surgery centers in the United States at this very second.

Laparoscopic Single Port Hysterectomy

As for your other starting instruments, I recommend starting with the 5 mm blunt Covidien Ligasure™ device, (although as stated any 5mm bipolar energy device will suffice). I also recommend having a 5 mm non-traumatic (wavy) grasper available for any part of the procedure that requires it. This can be easily threaded between the two existing 5mm instruments for difficult portions of the case, and removed for easier portions to reduce instrument “clanging.”

There are several different devices which a surgeon may wish to have available to complete this procedure. The majority of this surgery is completed with the surgeon’s dominant hand on the bipolar device and the nondominant hand on the vaginal manipulator. This should then change, upon reaching the vaginal cuff, for a monopolar Bovie™ type device in the dominant hand. The third instrument that can be used either by the surgeon or by the assistant will vary according to the clinical scenario. I would recommend having a 5 mm laparoscopic tenaculum (single tooth), a 5 mm Endo Kittner™, and several different types of nontraumatic graspers available in case they are needed. A suction irrigator should also be available, although my goal, and hopefully yours as well, will be to complete the procedure without enough blood loss to justify the use of the suction irrigator.

Laparoscopic Single Port Hysterectomy

References:

- 41) ESuture.Com - Olympus Triport Device - <https://www.esutures.com/product/0-in-date/69-olympus/101-miscellaneous/46243827-olympus-triport-15-laparoscopic-instrument-port-kit-WA58015T>. Retrieved 2019-07-12