



Salpingectomy after vaginal hysterectomy: Technique, tips, and pearls

↘ This expert surgeon emphasizes a careful and deliberate approach in the following technique for vaginal removal of the fallopian tube with ovarian preservation. He also describes a vaginal approach to salpingo-oophorectomy.

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In this article, I describe my technique for a vaginal approach to right salpingectomy with ovarian preservation, as well as right salpingo-oophorectomy, in a patient lacking a left tube and ovary. This technique is fully illustrated on a cadaver in the Web-based master course in vaginal hysterectomy produced by the AAGL and co-sponsored by the American College of Obstetricians and Gynecologists and the Society of Gynecologic Surgeons. That course is available online at <https://www.aagl.org/vaghystwebinar>.

For a detailed description of vaginal hysterectomy technique, see the article entitled “Vaginal hysterectomy using basic instrumentation,” by Barbara S. Levy, MD, which appeared in the October 2015 issue of *OBG MANAGEMENT* (available in the archive at obgmanagement.com). Next month, in the December 2015 issue of the journal, I will detail my strategies for managing complications associated with vaginal hysterectomy, salpingectomy, and salpingo-oophorectomy.



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Right salpingectomy

Start with light traction

Begin by placing an instrument on the round ligament, tube, and uterine-ovarian pedicle, exerting light traction. Note that the tube will always be found on top of the ovary (FIGURE 1). Take care during placement of packing material to avoid sweeping the fimbriae of the tube up and out of the surgical field. You may need to play with the packing a bit until you are able to deliver the tube.

Once you identify the tube, isolate it by bringing it down to the midline (FIGURE 2, page 28). One thing to note if

FIGURE 1 Locate the tube



The fallopian tube will almost always be found on top of the ovary.

IMAGE COURTESY OF AAGL

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FIGURE 2 Isolate the tube



Grasp the tube and bring it to the midline.

you're accustomed to performing bilateral salpingo-oophorectomy: The gonadal pedicle is fairly substantive and can sustain a bit of tugging. However, if you're performing salpingectomy with ovarian preservation, you need to be much more careful in your handling of the tube because the mesosalpinx is extremely delicate.

After you bring the tube to the midline, grasp it using a Heaney or Shallcross clamp. You could use energy to take this pedicle or clamp and tie it.

Make sure that the packing material is out of the way and that you have most of the tube nicely isolated. Don't take the tube too far up in the surgical field because, if you lose it, it can be hard to control the bleeding. Ensure that you have grasped the fimbriated end of the tube.

In some cases you can leave a portion of the tube right next to the round ligament (FIGURE 3). You can go back and take that portion later, if you desire. But when it comes to the potential for the fallopian tube to generate carcinoma, most of the concern involves the mid to distal end of the tube rather than the cornual portion.

Once the Shallcross clamp has a good purchase on the pedicle, bring the suture around the clamp and then pass it under the tube so that you encircle the mesosalpinx pedicle (FIGURE 4). It is extremely important during salpingectomy to tie this suture down gently but tightly. In the process, have

FIGURE 3 Focus on the distal tube



The cornual portion of the tube (proximal to the round ligament) can be left behind, if desired. The propensity for cancer centers on the distal end of the tube.

your assistant flash the Shallcross clamp open when you tie the suture. Otherwise, the suture will tend to tear through the mesosalpinx. Be very careful in your handling of the specimen at this point. Next, cut right along the edge of the clamp to remove the tube.

If you prefer, you can stick-tie the remaining portion again, but usually one tie will suffice because there is such a small

FIGURE 4 Clamp and tie the pedicle



Bring the suture around the clamp and then pass it under the tube so that you encircle the mesosalpinx pedicle.

FAST TRACK

Do not take the tube too far up in the surgical field because, if you lose it, it can be hard to control bleeding

Transvaginal technique for salpingo-oophorectomy

Once the hysterectomy is completed, grasp the round ligament, tube, and uterine-ovarian pedicle, placing slight tension on the pedicle, and free the right round ligament to ease isolation of the gonadal vessels. Using electrocautery, carefully transect the round ligament. It is critical when isolating the round ligament to transect only the ligament and not to get deep into the underlying tissue or bleeding will ensue. If you “hug” just the round ligament, you will open into the broad ligament and easily be able to isolate the gonadal pedicle.

Once the pedicle is nicely isolated, readjust your retractors or lighting to improve visualization. Now the gonadal vessels can be isolated up high much more easily (FIGURE 1).

Next, use a Heaney clamp to grab the pedicle, making sure that the ovary is medial to the clamp (FIGURE 2).

FIGURE 1 Isolate the gonadal vessels



Once optimal visualization is achieved, the gonadal vessels can be isolated easily.

In this setting, there are a number of techniques you can use to complete the salpingo-oophorectomy. I tend to doubly ligate the pedicle. To begin, cut the tagging suture to get it out of the way. Then place a free tie lateral to the clamp, bringing it down and underneath to fully encircle the pedicle. Ligate the pedicle then cut the free tie. Follow by cutting the pedicle beside the Heaney clamp and removing the specimen. Stick-tie the remaining pedicle.

Locate the free tie, which is easily identified. Place your needle between that free tie and the clamp so that you do not pierce the vessels proximal to the tie with that needle. Then doubly ligate the pedicle.

Check for hemostasis and, once confirmed, cut the pedicle tie. Because this patient does not have a left tube and ovary, the procedure is now completed.

FIGURE 2 Keep the ovary medial to the clamp



Use a Heaney clamp to grab the pedicle, keeping the ovary medial to the clamp.

**FAST
TRACK**

Uncontrolled bleeding may necessitate removal of the ovary

pedicle there. The distal portion of the pedicle eventually will necrose close to the tie. The next step is ensuring hemostasis.

On occasion, if you lose the pedicle high in the surgical field, you can try to oversew it. A 2-0 Vicryl suture may be used to place a figure-eight stitch to control bleeding around the mesosalpinx. Alternatively, an energy device may be used for hemostasis. Rarely, if you encounter bleeding that does

not respond to the previous suggestions, you may need to remove the ovary to control bleeding if the tissue tears.

Conclusion

The tubes are usually readily accessible for removal at the time of vaginal hysterectomy. There is evolving evidence that the tube may play a role in malignancy of the female

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UPDATE

pelvic floor dysfunction

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SURGICAL Techniques

salpingectomy after vaginal hysterectomy

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Bilateral salpingectomy: Key take-aways

Locate the tube. The fallopian tube always lies on top of the ovary and should be found there. On occasion, the abdominal packing used to move the bowel out of the pelvis will “hide” the tube; readjusting this packing often solves the problem.

Be gentle with the mesosalpinx as it is very delicate and can easily avulse. It is very important to “flash the clamp” (open the clamp and then close it) as you free-tie the mesosalpinx to avoid cutting through the delicate pedicle.

Remove as much tube as possible. The fimbriae end of the tube usually is free and easy to identify. Try to

remove as much of the tube as possible. Often, a bit of the proximal tube is left in the utero-ovarian pedicle tie.

Clean up. You will often find peritubal cysts or “tubal clips” from a sterilization procedure. I recommend that you remove any of these you encounter to avoid problems down the road. Often, these cysts and clip-like devices are removed as part of the specimen.

Dry up. Always confirm hemostasis before concluding the procedure. If there is bleeding, be sure to assess the mesosalpinx. Occasionally, the pedicle can be torn higher up, near the gonadal vessels. Investigate this region if bleeding seems to be an issue.

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Transvaginal salpingo-oophorectomy: Key take-aways

Perfect a technique. There are many approaches to transvaginal removal of the adnexae; pick one and perfect it. The better you are, the fewer complications you will have. Recognize that a different approach (use of a stapler or energy sealing device, for example) may prove useful in some settings. Be surgically versatile and recognize situations that might call for something other than your usual approach.

Optimize visualization. The tubes and ovaries are usually very accessible vaginally. Use an abdominal pack to move the bowel out of the pelvis. Adequate retraction and use of a lighted retractor or suction irrigator will facilitate exposure.

Ligate the gonadal vessels. Retraction of the tube and ovary complex medially away from the pelvic sidewall will allow you to place a clamp (or stapler or energy device) lateral to secure the gonadal vessels and ensure complete removal of the adnexae.

Release the round ligament. Although this step is usually not required, it will allow you

to isolate the adnexae more precisely, especially when dealing with an adnexal mass transvaginally. It is critical that you “hug” the round ligament and refrain from penetrating deeply into the underlying tissues, or bleeding will occur. Once the round ligament is released, the tube and ovary are isolated on the gonadal pedicle and can be completely excised with this technique.

Manage bleeding. If suturing, I prefer to doubly ligate the gonadal vessels. Once I clamp the pedicle, I “free-tie” the gonadal vessels with an initial suture. This suture secures the vascular pedicle and prevents retraction. The adnexae can then be removed, followed by placement of a “stick-tie” to re-ligate the pedicle. Although this vascular pedicle is more robust than the mesosalpinx, it, too, can be avulsed, so it is important to proceed with caution. I recommend having a long clamp (uterine packing forceps or MD Anderson clamp) available in your instrument pan to facilitate specific isolation of the gonadal vessels along the pelvic sidewall in the event avulsion does occur.



When suturing the gonadal vessels, doubly ligate them

genital tract. Thus, removal may be preventive. In addition, if there are paratubal cysts or hydrosalpinx from prior tubal ligation, it makes sense to remove the tube. There is little evidence to suggest that removal of the tubes accelerates the menopausal transition

due to compromise of the blood supply to the ovaries.

You must be very gentle when handling and removing just the tubes. The mesosalpinx is delicate and easily torn or traumatized. A careful and deliberate approach is warranted. ☹

Access the AAGL-produced and ACOG and SGS co-sponsored “AAGL online course on vaginal hysterectomy” at <http://www.aagl.org/vaghystwebinar>



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