

8 Surgical Approach to the Tubes: Subumbilical Minilaparotomy

This chapter covers the evaluation and preparation of a client undergoing a subumbilical minilaparotomy procedure. It also includes the steps for entering the abdomen and delivering the tubes. (Occluding the tubes and closing the abdomen are described in Chapters 9 and 10.) The descriptions that follow include all of the major steps of the procedure, most of which are performed by the surgeon, with support from the surgical assistant.

Subumbilical minilaparotomy is used for postpartum clients; a transverse incision is usually made at the lower border of the umbilicus. The transverse incision is preferable to a vertical incision because it is easier to perform and results in a better healing process. *The uterine elevator is not used in the subumbilical procedure.*

Evaluation of the Client

Ideally, a postpartum client requesting female sterilization should have been counseled and assessed before arriving at the facility for delivery. Even so, additional counseling and an assessment of her continuing interest in and suitability for sterilization should again be performed before the client is transferred from the maternity ward to the surgical area for sterilization.

An important step is to determine the condition of the infant. In some cases, if the infant's health is unstable, the client may want to postpone the sterilization procedure, since her desire for permanent contraception may change if the infant dies or suffers from some health problem.

Additionally, confirm that the client has not consumed solid foods for six hours and fluids for two hours before surgery.

At this point, the surgeon must:

- Review the client’s medical history and physical exam results from the medical record. It is important to know if the client experienced any complications during delivery that might increase the risk for complications during the sterilization procedure and that might require delaying the surgery.
- Verify the client’s informed decision and consent by asking if she still wants the procedure and why she wants it.
- Perform a physical examination, if the record does not provide complete information about the client’s postpartum condition.

NOTE: For postpartum clients who have not been counseled but have clearly made a prior decision to undergo permanent sterilization, informed consent should be obtained before the surgery.

After the client has been evaluated and the decision has been made to proceed with surgery, prepare the client before she enters the operating theater, as follows:

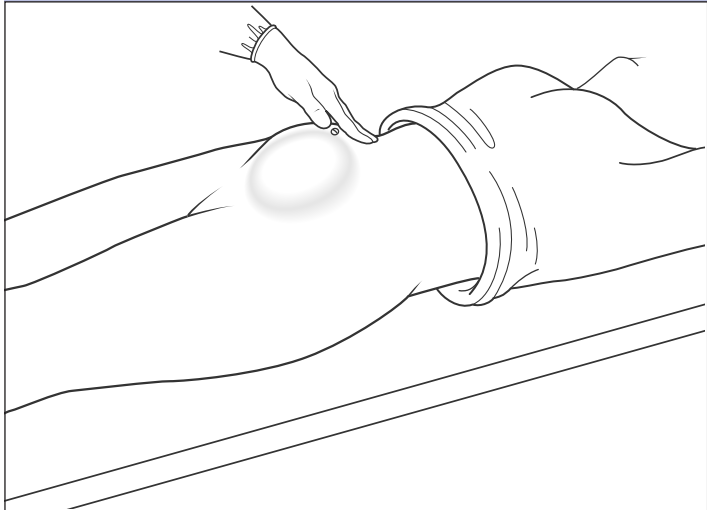
- Verify that the client understands the most important steps of the procedure (e.g., what local anesthesia means, what she might feel at various times during the procedure, and that she may be asked to “assist” during the procedure by taking a deep breath).
- Provide a surgical gown for the client and give her a private place in which to change. A client’s modesty should be preserved, so if a surgical gown is likely not available for the client, she should retain her robe, which will preserve some modesty and also will help keep her warm.
- Ask the client to empty her bladder.

Position the client for surgery in the dorsal supine position (Fig. 13a or 13b, page 47). The height of the uterine postpartum fundus should be assessed to confirm that it is close to the umbilicus (Fig. 32).

Client Preparation Just before Entering the Operating Theater

Positioning the Client

FIGURE 32. Positioning the client for subumbilical minilaparotomy: Assessing the height of the uterine fundus



Preparing the Client's Abdominal Area

Using an antiseptic-soaked swab on a sponge forceps, clean the umbilicus and throw away the swab. Take a second swab, and, starting from the subumbilical area, move progressively out from the umbilicus in circular motion (Fig. 33, page 74). Swab at least a 12-cm circumference progressively in this manner; *do not bring the used swab back over a cleaned area*. Repeat the preceding steps with a new soaked swab.

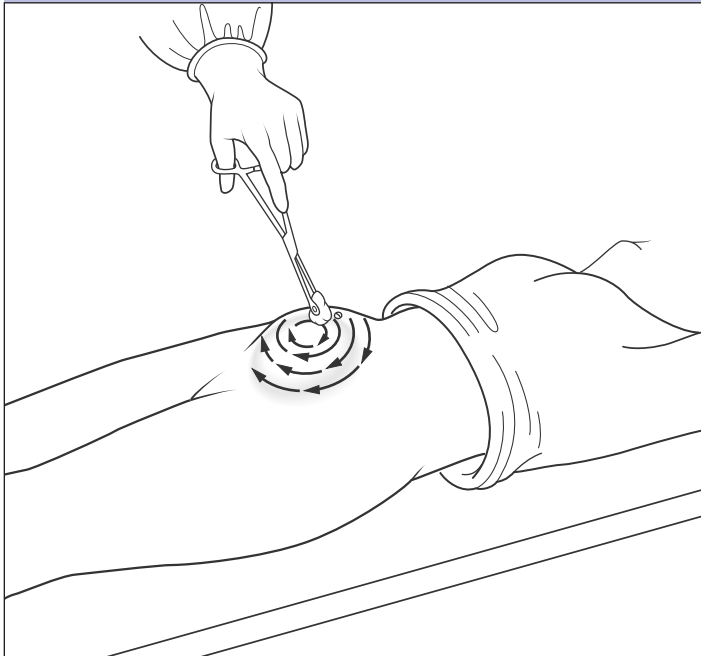
After allowing the antiseptic to dry, create a sterile field by placing sterile drape sheets (either four drapes or one fenestrated drape) around the immediate operative site. If four drapes are used, place the drapes above (to the head of the client), below (to the legs of the client), and on both sides of the operative area, and secure them in place with towel clips, as needed (Fig. 17, page 52). Once the sheets are in position, when placed at right angles they will form a sterile window.

At this moment, the client monitor should administer any additional pain medication (e.g., diazepam and meperidine), according to the regimen selected.

Selecting the Incision Site

The best area for the subumbilical incision is just beneath the umbilicus, as during the immediate postpartum period the umbilicus is not deep and lies on top of the enlarged postpartum uterine fundus. Additionally, the abdominal wall in this area is thin and flexible.

FIGURE 33. Preparing the client's abdominal area before a subumbilical mini-laparotomy



Infiltrate the abdominal wall, following the local anesthesia infiltration technique selected (Chapter 5, pages 33 and 35). To open and enter the abdomen, the surgeon and the surgical assistant work together.

Entering the Abdomen

The main responsibilities of the surgeon are to:

- Incise and dissect the abdominal wall
- Access and identify the tubes
- Provide direction to the assistant on how to help

The main responsibilities of the surgical assistant are to:

- Expose the abdominal wall layers
- Hold the retractors parallel to the client's abdomen once all layers are opened
- Move the retractors as needed, to maintain the incision opening
- Actively follow the surgery and help as needed

Before incising, check for effective anesthesia block in the selected incision site by pinching the skin with a dissecting forceps.

Make a skin incision approximately 1.5 to 3 cm long, and **open it only through the epidermis** (Fig. 34).

Using a Kelly forceps or Army-Navy retractors, **bluntly dissect the subcutaneous fat**. Do so gently and precisely, to minimize tissue trauma and bleeding. Control bleeding in any vessel, as needed. Dissect subcutaneous tissue until the fascia is visualized and exposed with retractors (Fig. 35, page 76).

PITFALL: Among postpartum women, the abdominal wall in the subumbilical area is very thin. Therefore, dissection must be performed *cautiously*, to avoid injury to underlying structures.

FIGURE 34. The subumbilical minilaparotomy: Incision site

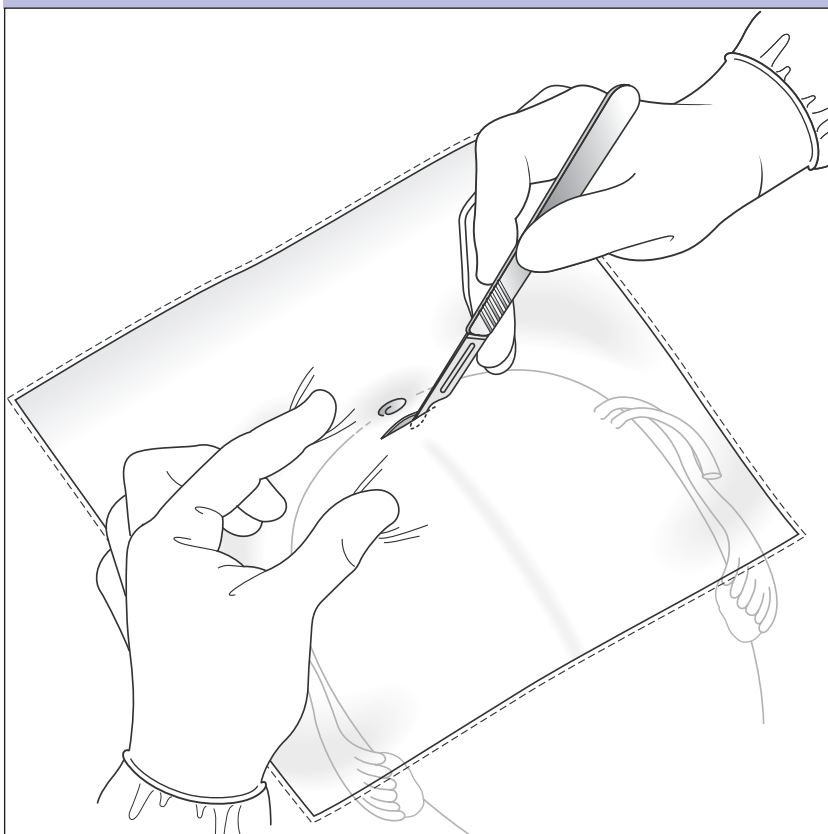


FIGURE 35. Entering the abdomen: Visualizing the fascia

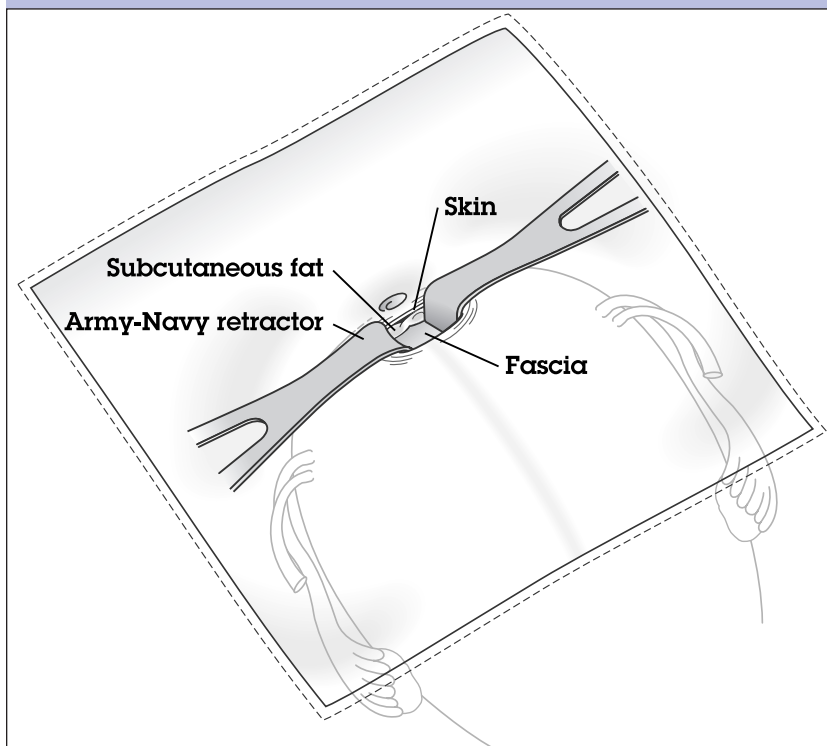


FIGURE 36. Anterior view of the layers of the abdominal wall

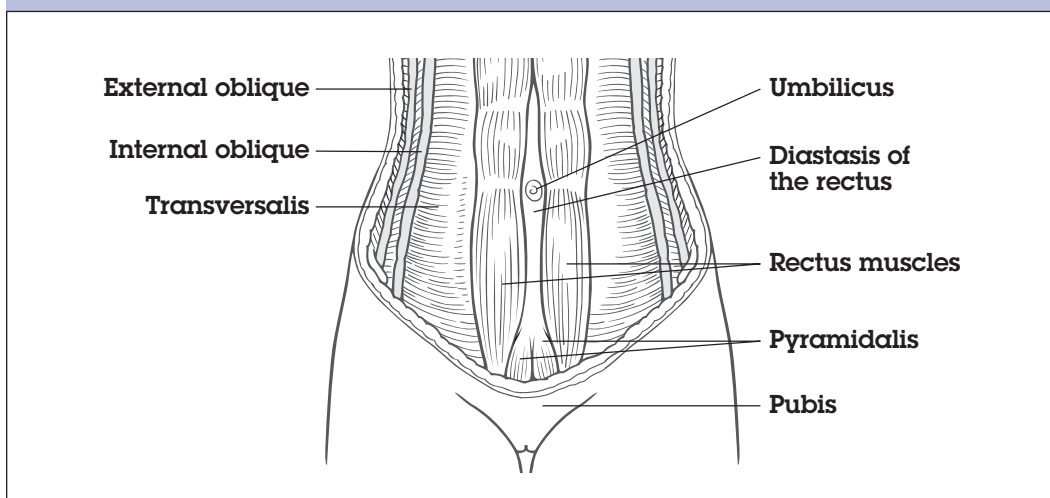
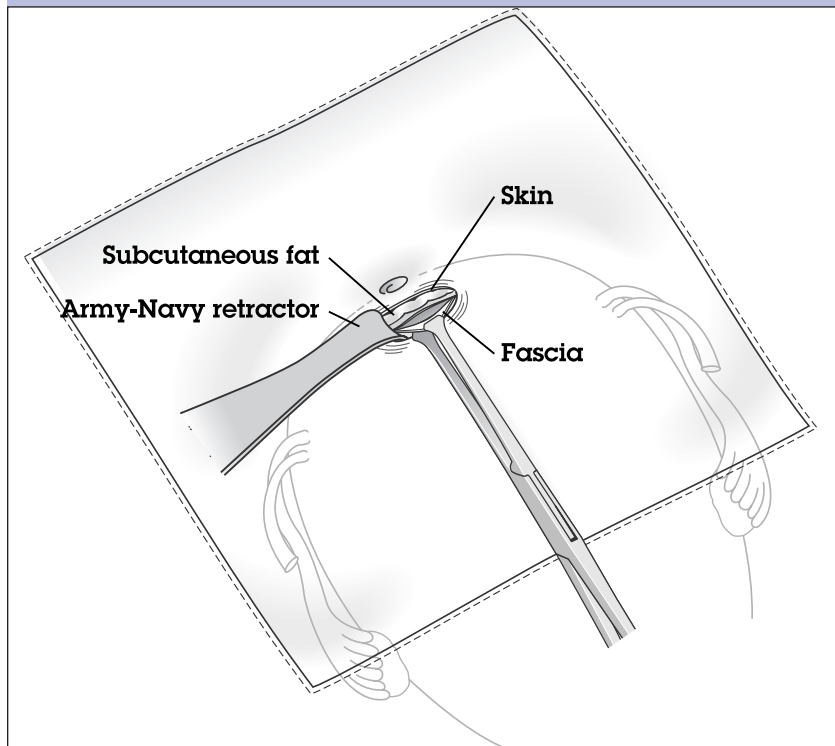


FIGURE 37. Entering the abdomen: Opening the fascia



HINT: Due to the diastasis of the rectus, there is no intervening rectus muscle under the umbilicus (Fig. 36); in postpartum clients, the fascia and peritoneum usually adhere, making them one layer. Therefore, layer-by-layer dissection usually is unnecessary, since the surgeon generally enters the abdomen immediately after incising the fascia.

To incise the fascia, place the table in a slight Trendelenburg position (20° or less), then grasp and elevate the fascia with Allis forceps in the midline of the incision at the inferior and superior portion. Using scissors, incise the fascia transversely. Extend the fascial opening slightly beyond the skin incision on both sides (Fig. 37). If you are already in the abdominal cavity, proceed to access the tubes.

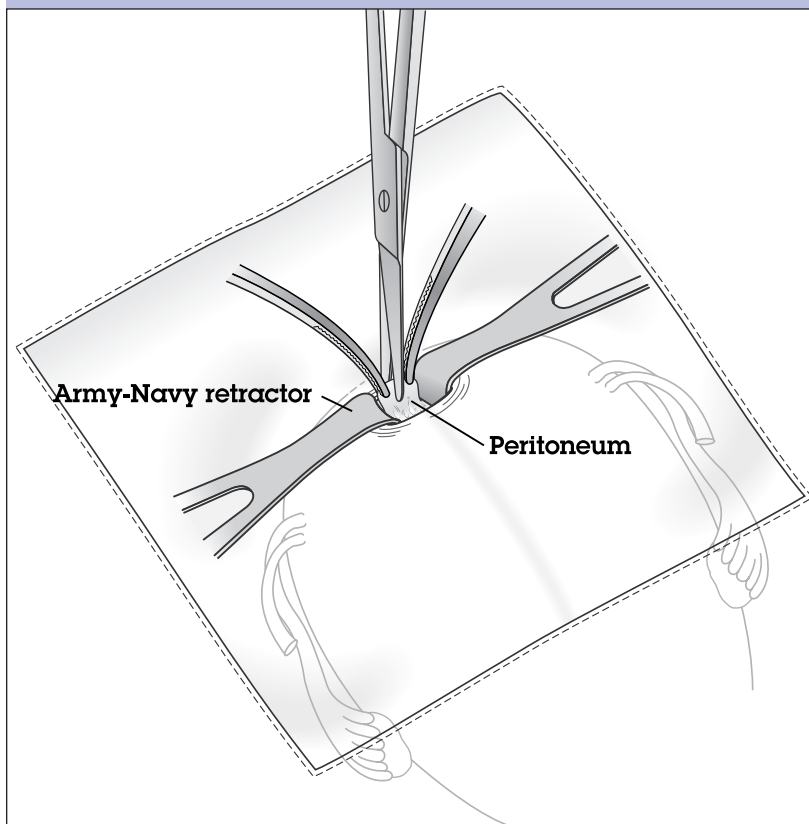
Incise the peritoneum. If the previous step did not provide entry into the abdomen, identify and elevate the peritoneum by grasping it at two points with hemo-

stats. To prevent injury to underlying structures, avoid using toothed instruments. Once the peritoneum has been elevated, to protect the underlying viscera and structures from injury, check that the bowel, bladder, or omentum has not been grasped inadvertently. Once that has been ascertained, make a small opening in the peritoneum with a scissors or hemostat (Fig. 38).

HINT: To avoid grasping the bowels along with the peritoneum, be sure to ask the client to take a deep breath before you grasp the peritoneum. Before incising it, look at or feel a fold of the grasped tissue, to confirm that it is the translucent peritoneum and that abdominal contents are not adhering to it.

Once entry into the abdominal cavity is confirmed, the surgical assistant should gently place the retractors

FIGURE 38. Entering the abdomen: Opening the peritoneum



inside the abdomen to maximally expose the uterus and tubes (Fig. 39).

PITFALL: In some clients, particularly in those who are obese, the preperitoneal fat is abundant. This can cause difficulties during the process of opening the peritoneum. It is advisable to dissect slowly, without making unnecessary cuts, and to identify the peritoneum before cutting.

From this point until the completion of tubal occlusion, the surgical assistant must keep the incision open with retractors and must adjust the retractors according to the surgeon's needs.

Accessing and Delivering the Fallopian Tubes

One of the advantages of subumbilical access to the fallopian tubes is that the skin is pliable; this allows the surgical assistant to move the incision to the sides so the tubes can be accessed in the area in which they

FIGURE 39. Using the retractors to expose the uterus and tubes

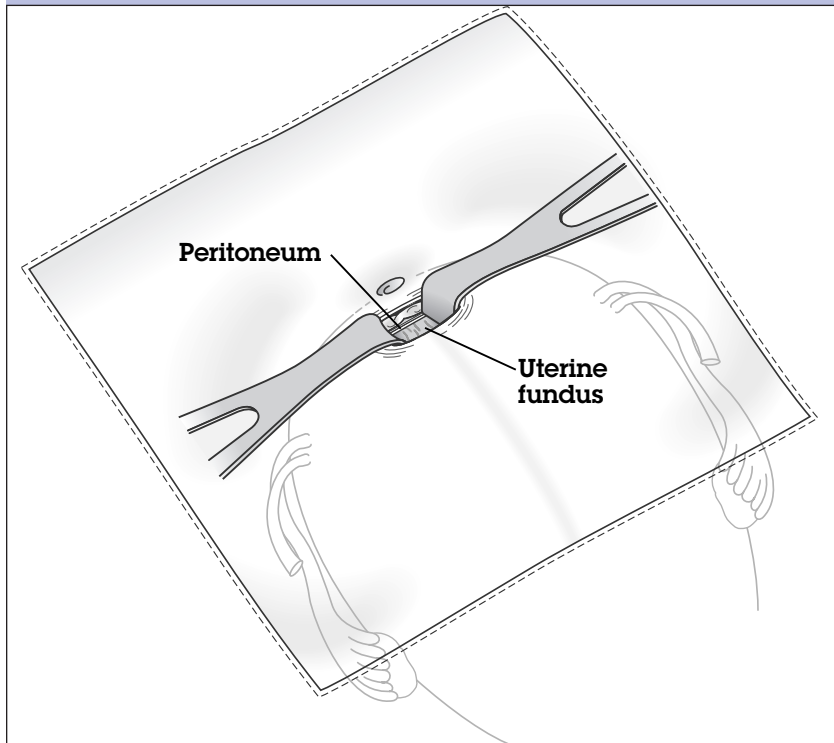
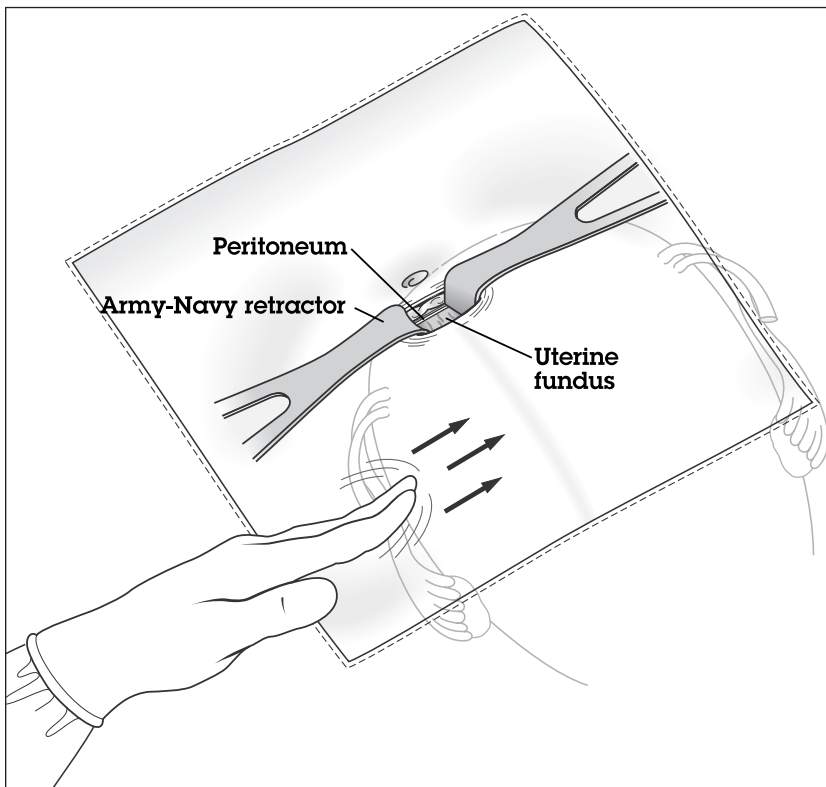
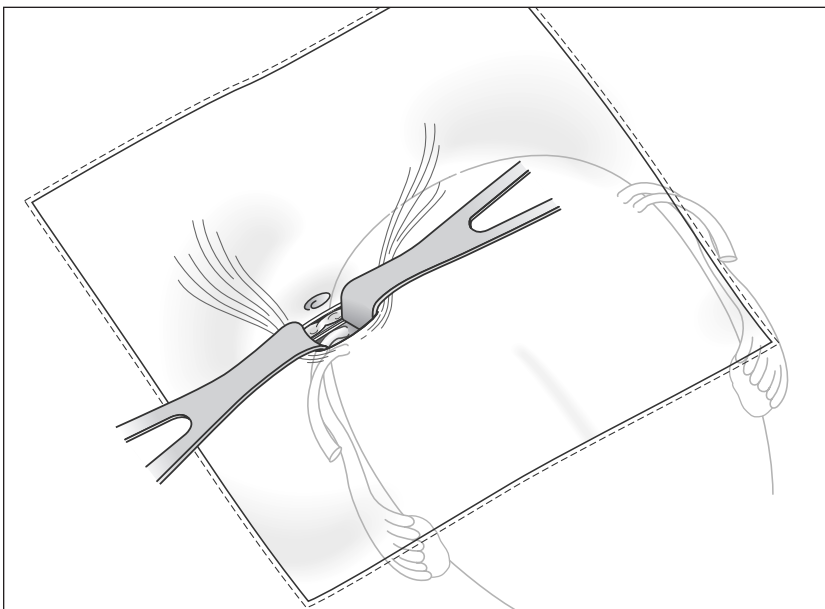


FIGURE 40. Accessing the tubes

(a) Pushing the uterus toward the opposite side of the tube being accessed



(b) Moving the incision to be above the tube being accessed



are located anatomically. Also, the uterus can be manipulated from the outside, allowing the cornua to be moved to the incision and thus making access to the tubes easy.

Clear a path to see the uterus and tubes.

Visualization of the uterus and tubes may be obscured by the omentum or bowels. If this is the case, ask the client to take a deep breath **while you push the bowels gently out of the way** using the retractors.

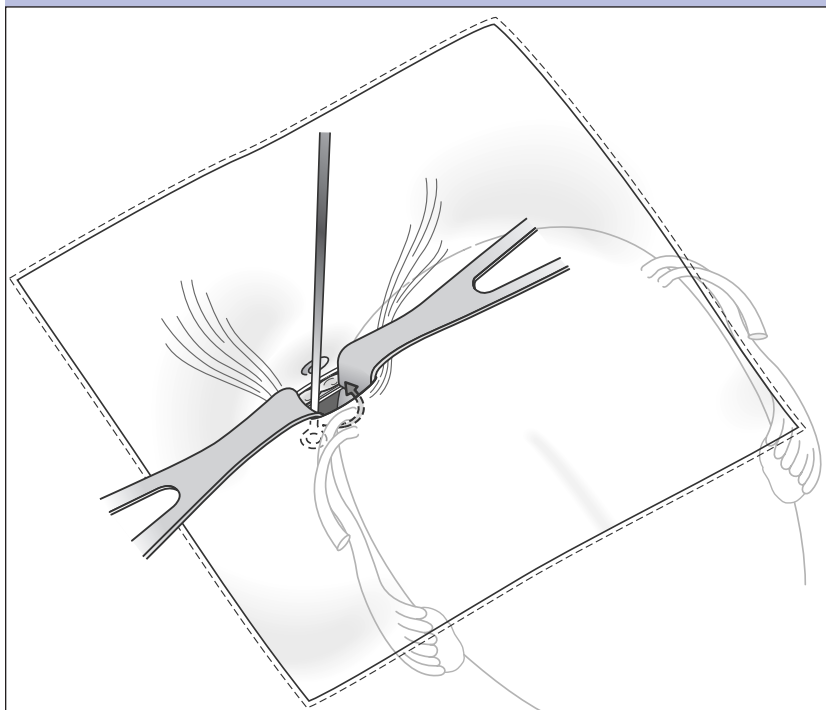
PITFALL: In certain situations, the client may be unable to assist the surgeon by taking a deep breath because she is nervous, scared, or in pain. In these cases, the surgeon *must* remain calm and should wait for the client to relax and try again. If she remains unable to assist, provide sedation (or additional sedation).

Using manual, external pressure on the abdomen, **gently push the uterus toward the opposite side of the tube being accessed** (Fig. 40a), while the surgical assistant positions the incision over the fallopian tube by gently moving and pressing down the side of the uterus both retractors simultaneously and thus moving the incision to the cornual area (Fig. 40b). This will allow you to visualize the tube and grasp it.

ALTERNATIVE: If the tube cannot be visualized, use the tubal hook to gently bring it to the incision site. With the uterus pushed laterally and the incision placed as close to the cornua as possible, gently slide the tubal hook behind the fundus and sweep the hook around one side of the uterus toward the anterior, lower part of the uterus, and then pull the tubal hook horizontally and out through the incision. This maneuver should hook the tube and sweep it forward to the incision (Fig. 41, page 82).

HINT: Since the peritoneum has nerve endings, minimize pulling and tugging so as to prevent pain and vasovagal reactions (e.g., nausea, vomiting, and fainting).

FIGURE 41. Using the tubal hook: Bringing the tube into view



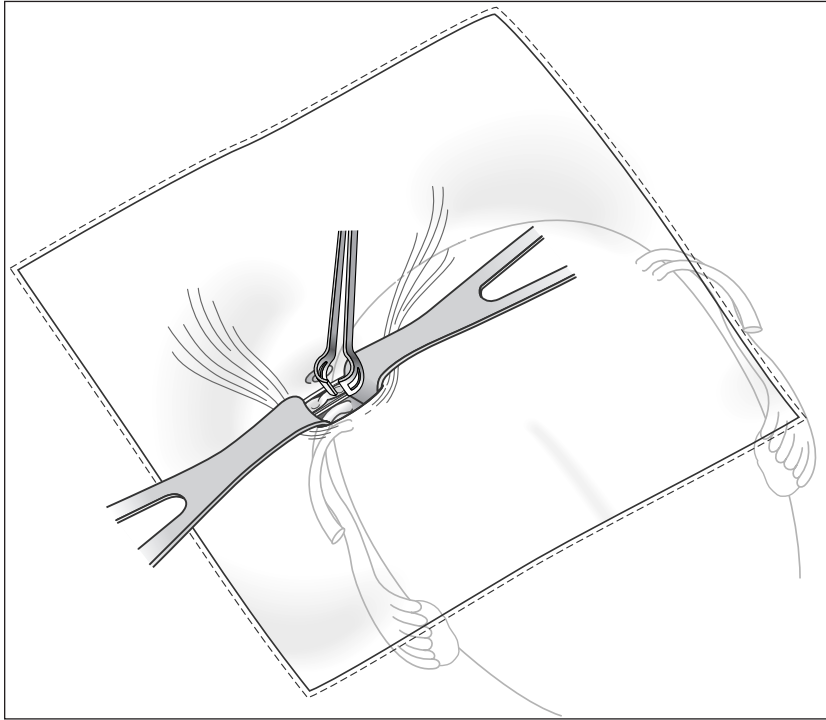
Once the tube has been visualized, grasp it atraumatically with a baby Babcock forceps (Fig. 42a). **Confirm the identity of the tube** by following it to the fimbriated end (using the baby Babcock forceps with one hand and a delicate dissecting forceps with the other) (Fig. 42b) and pulling the tube out gently until the fimbria can be seen (Fig. 42c, page 84).

NOTE: Neglecting this important step may lead to ligation of other structures (such as the round ligament) instead of the fallopian tube, which will result in failure of the procedure.

At this point, you are ready to ligate the tube, as is described in Chapter 9. After the tube is ligated on one side, repeat the above steps (pages 79 to 82) on the other side to ligate the other tube.

FIGURE 42. Grasping and identifying the tube

(a) Grasping the tube with a baby Babcock forceps



(b) Moving the tube to the opening

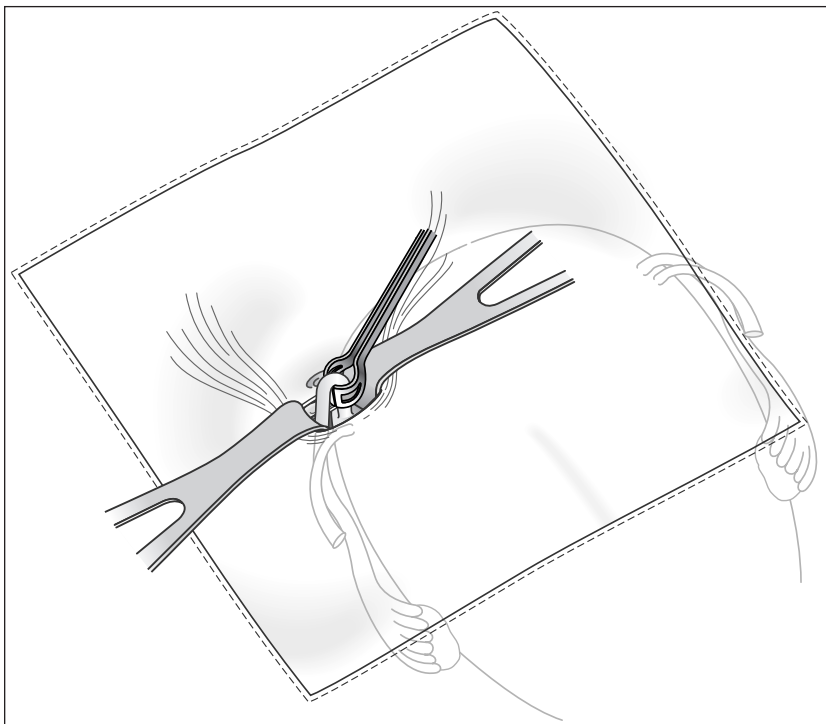


FIGURE 42. Grasping and identifying the tube (cont'd.)

(c) Pulling the tube out and visualizing the fimbria

