

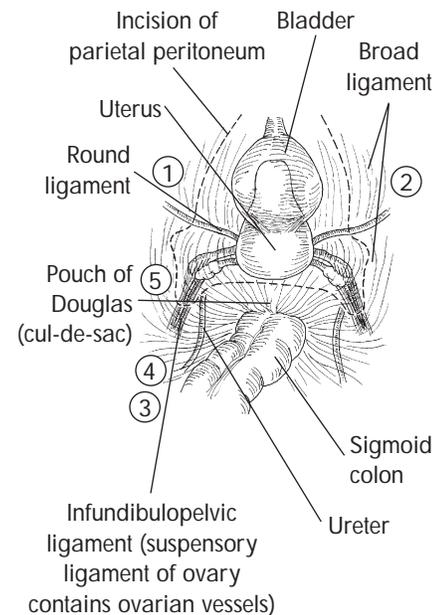
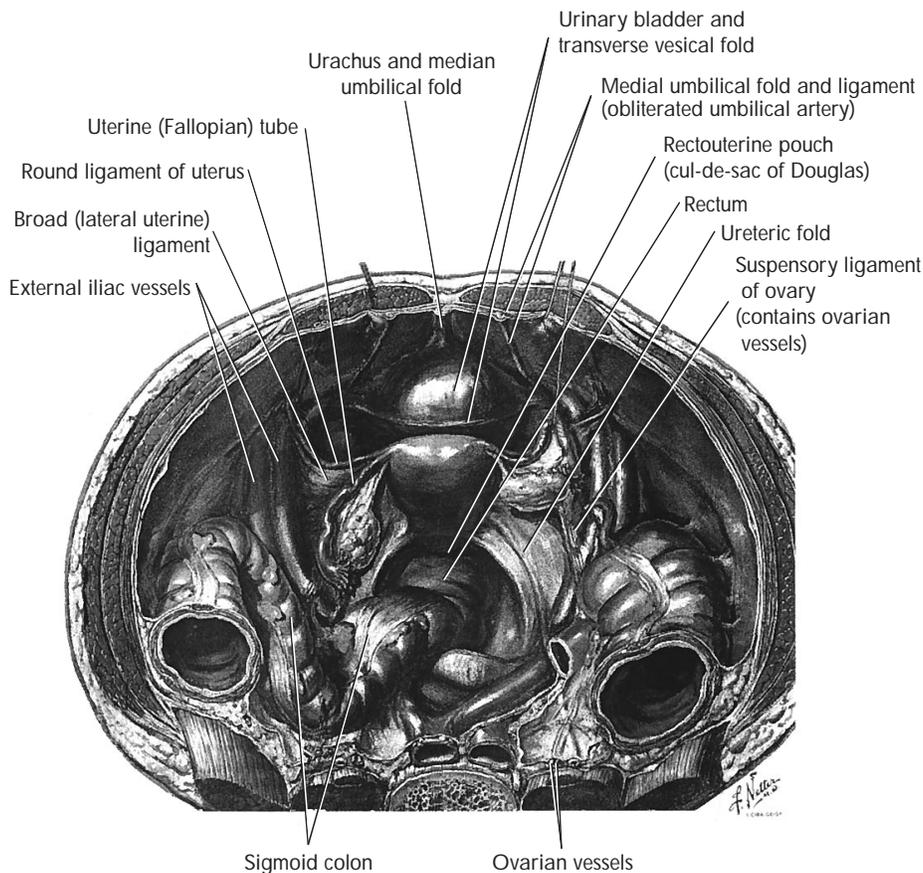
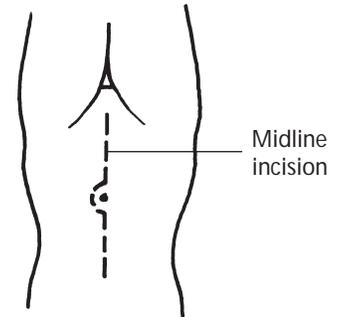
RADICAL CYSTECTOMY IN THE FEMALE

10

FIGS. 10-1 AND 10-2. For radical cystectomy in the female patient, the surgeon makes a midline incision, as is done in the male patient, and then divides and frees the following ligaments and blood vessels of the female reproductive organs:

- 1 Ligation and division of the round ligaments.
- 2 Ligation and division of the broad ligaments.

- 3 Ligation and division of the infundibulopelvic ligaments (suspensory ligaments of the ovary).
- 4 Ligation and division of the ovarian vessels.
- 5 Division of the posterior peritoneum between the rectum and the uterus after pelvic lymphadenectomy.



10-1

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10-2

PROXIMAL DISSECTION AFTER LYMPHADENECTOMY AND URETERAL DIVISION

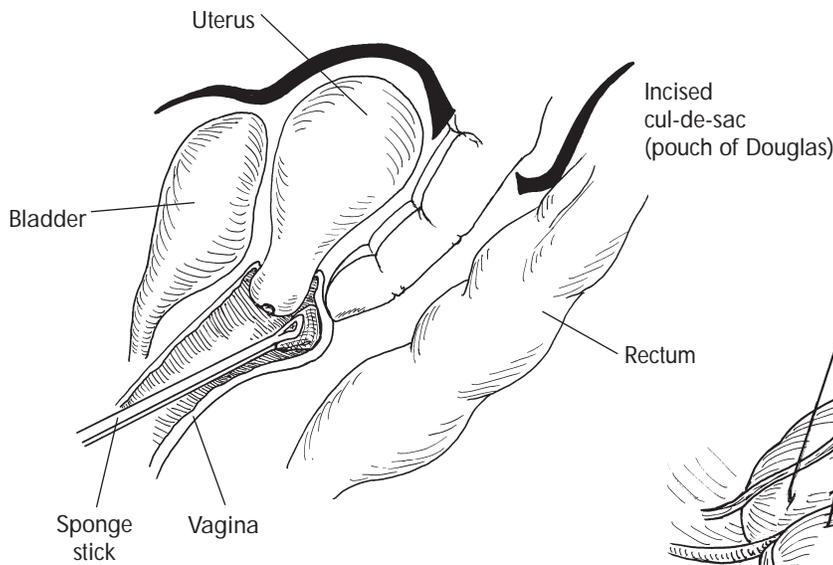
We prefer first to establish the space between the uterus and rectum before the ligation and division of the lateral bladder pedicles.

After the peritoneal incision is made across and between the uterus and rectum (cul-de-sac or pouch of Douglas), the surgeon uses the fingers to bluntly dissect a plane between the uterus and rectum down to the point at which the Foley catheter balloon (which is inflated with 30 ml of saline solution) can be palpated in the bladder through the vaginal walls.

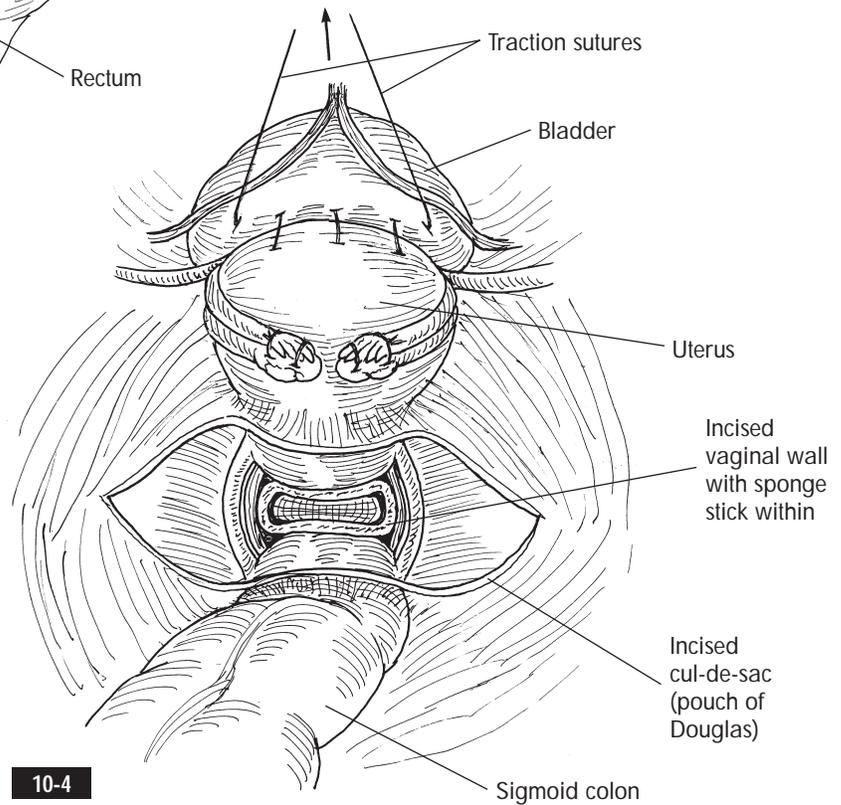
By placing one or even two lap-

arotomy pads into this space between the bladder and uterus on one side and the rectum on the other for a few minutes, the surgeon can create a well-defined space for the next steps of the cystectomy.

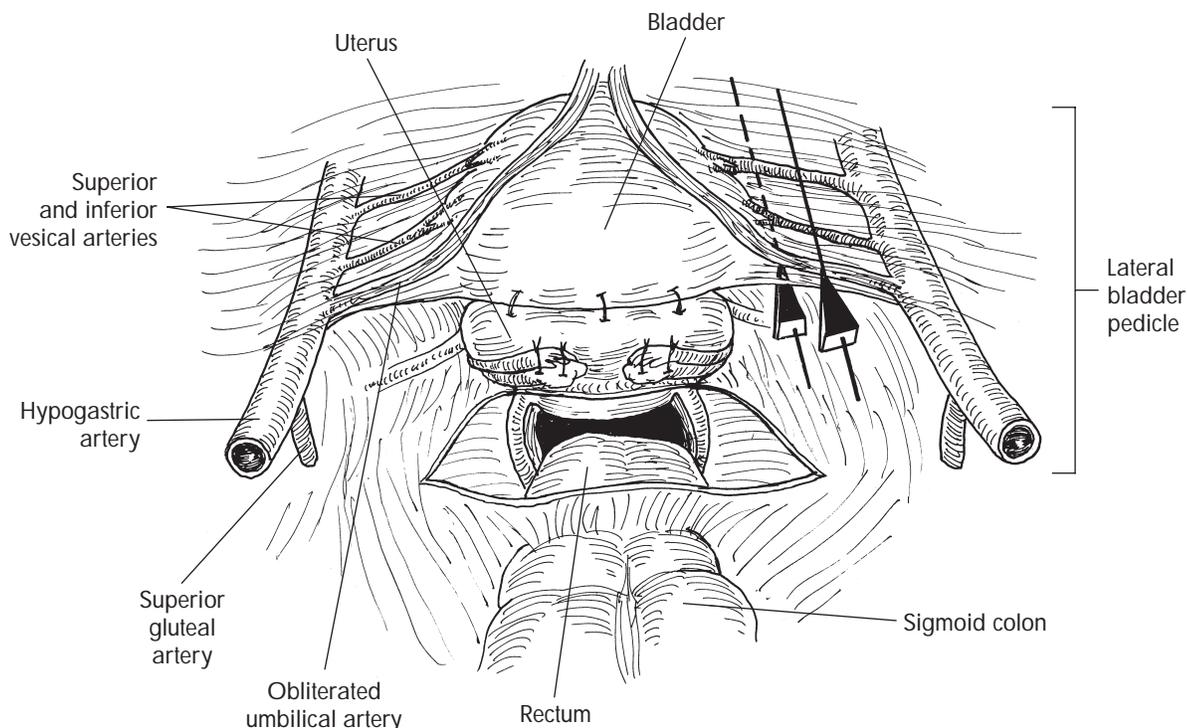
FIGS. 10-3 AND 10-4. While the assistant passes a sponge stick into the vagina from below and presses it up against the most cephalad position of the vagina posterior to the cervix, the surgeon palpates the sponge stick from the proximal dissection through the cul-de-sac (pouch of Douglas). Directly over the site at which the sponge stick can be palpated, the surgeon incises the vaginal wall, thus creating the proximal opening into the vagina.



10-3



10-4



10-5

LATERAL BLADDER PEDICLE DIVISION

FIG. 10-5. The lateral bladder pedicles, which consist of the obliterated umbilical artery, superior vesical artery, inferior vesical artery, and uterine vessels, can be ligated and divided by GIA 60 or Endo GIA 60 staplers, large clips with right-angle clip applicators, or Haney or Ballantine clamps with modified pulley stitches as described in Chapter 9 (see pp. 90-93).

The hypogastric artery can be tied off distal to the superior gluteal artery in the female patient.

Thinning out the lateral pedicle by finger-pinching the fatty tissue will facilitate ligation and division (see p. 92).

The lateral bladder pedicles are divided distally to the endopelvic fascia.

DISTAL/ANTERIOR DISSECTION

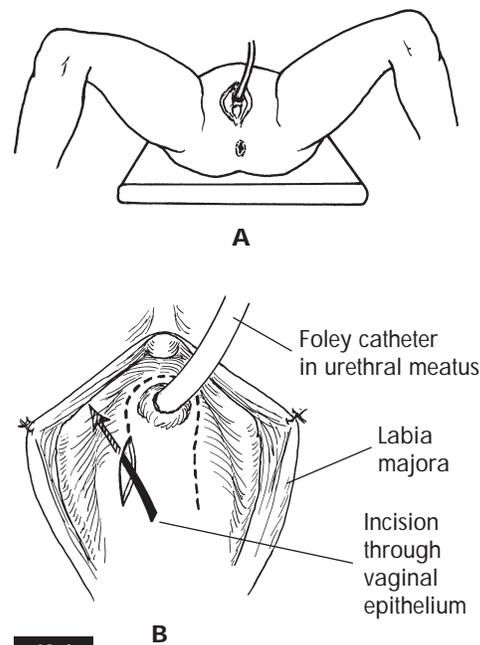
If the patient is placed in a semilithotomy position, the surgeon can work from above while an assistant works from below at the vaginal opening for distal bladder and urethral dissection. For convenience, we prefer to perform this part of the operation first, even before making the midline abdominal incision for the cystectomy.

FIG. 10-6. With the patient in a lithotomy position (A), the surgeon performs a distal bladder neck dissection as is done in the Raz needle suspension procedure (see pp. 141-143).

After palpating the Foley catheter balloon at the bladder neck region, the surgeon injects saline solution to separate a plane between the vaginal epithelium and the vesical tissues above.

Instead of creating two parallel incisions as is performed in the Raz procedure, the surgeon makes an inverted-U incision to include the urethral meatus (B).

Lithotomy Position for Distal Urethral Dissection



10-6

FIGS. 10-7 AND 10-8. With sharp and blunt dissection, the surgeon punctures the pelvic fascial complex (urethropelvic and the endopelvic fascial layers) to enter the paravesical space bilaterally. Mayo scissors are used with a spreading rather than a cutting action and the surgeon uses the index fingers to further develop the two lateral fascia defects. The horizontal part of the incision around the urethra is minimally developed such that the vaginal epithelium is divided but no further dissection proximally is performed at this time.

Sponge packings are inserted into these two periurethral spaces to serve as tamponades to prevent potential venous bleeding.

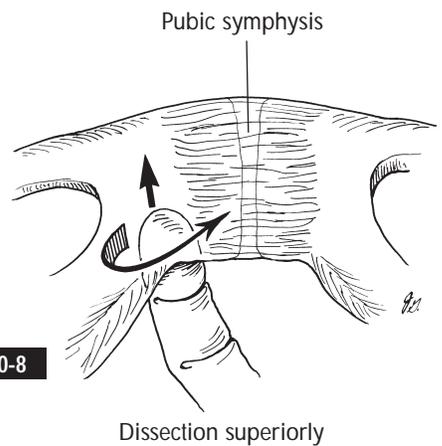
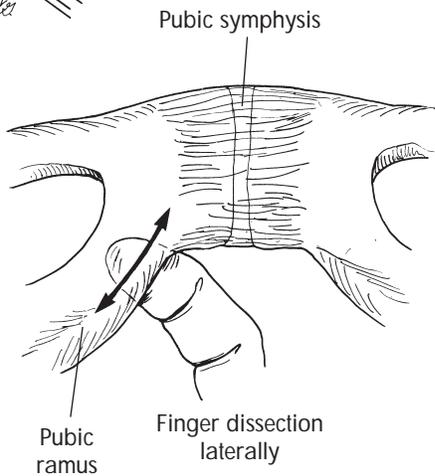
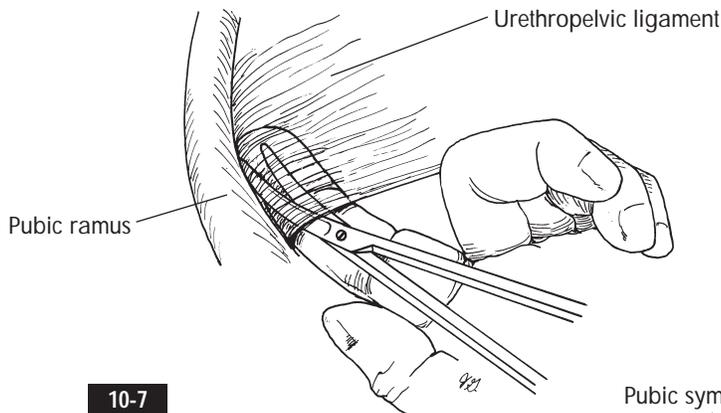
Once this stage of the procedure is completed, the patient can be placed into a supine flexed position for the start of the cystectomy with the midline incision.

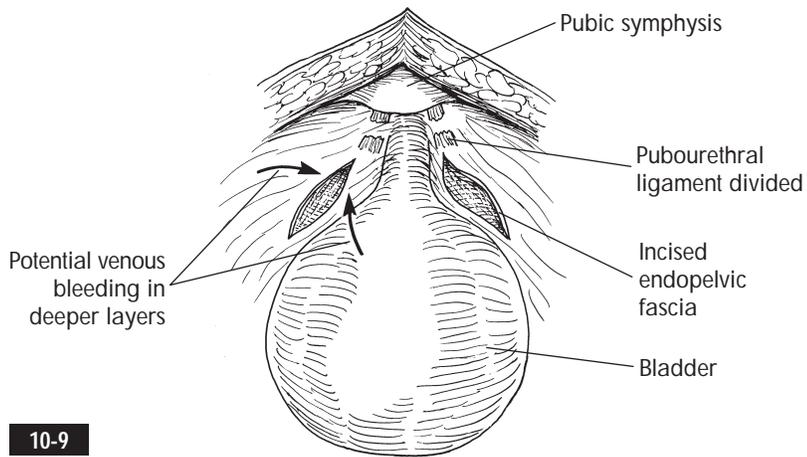
DISTAL URETHRAL DISSECTION FROM PROXIMAL APPROACH

FIG. 10-9. From the abdominal approach, now the pubourethral ligaments are divided, and the dorsal veins are ligated. Unlike in men, the dorsal venous complex in women often consists of only a few veins.

FIG. 10-10. From the previous dissection on the vaginal side, the surgeon first inserts the left index finger from the vaginal side up through the endopelvic fascial complex into the retropubic space.

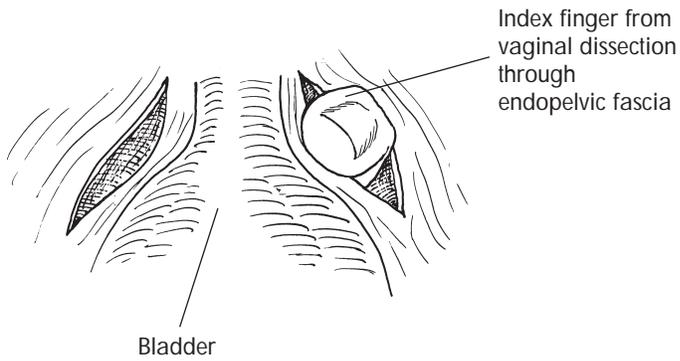
Mayo Scissors Perforation of Fascial Complex



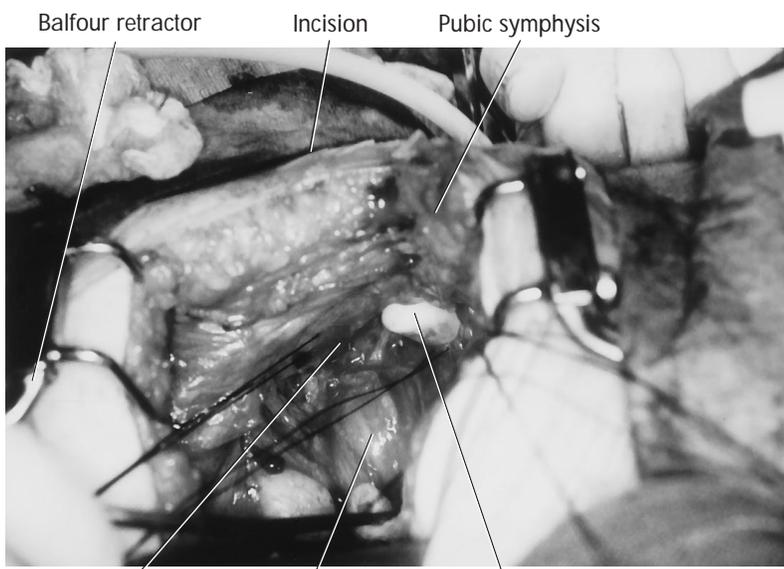


10-9

Retropubic View



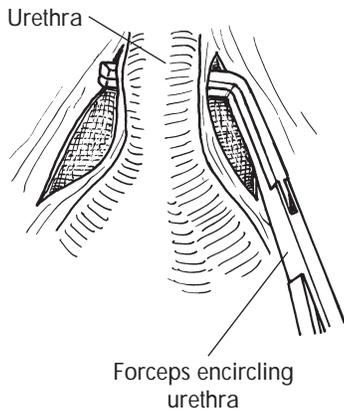
A



B

10-10

Retropubic View

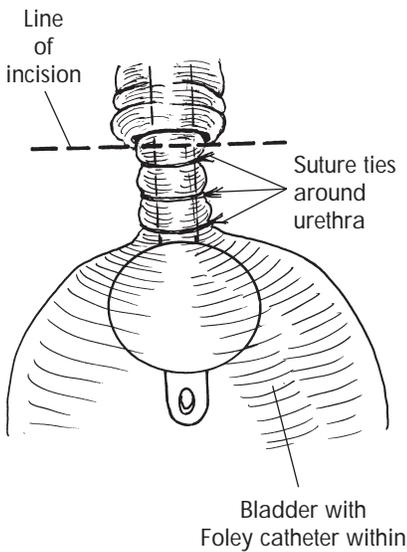


10-11

FIG. 10-11. With the point of a right-angle clamp held in the right hand, the surgeon can follow the left finger down the retropubic space to encircle the urethra.

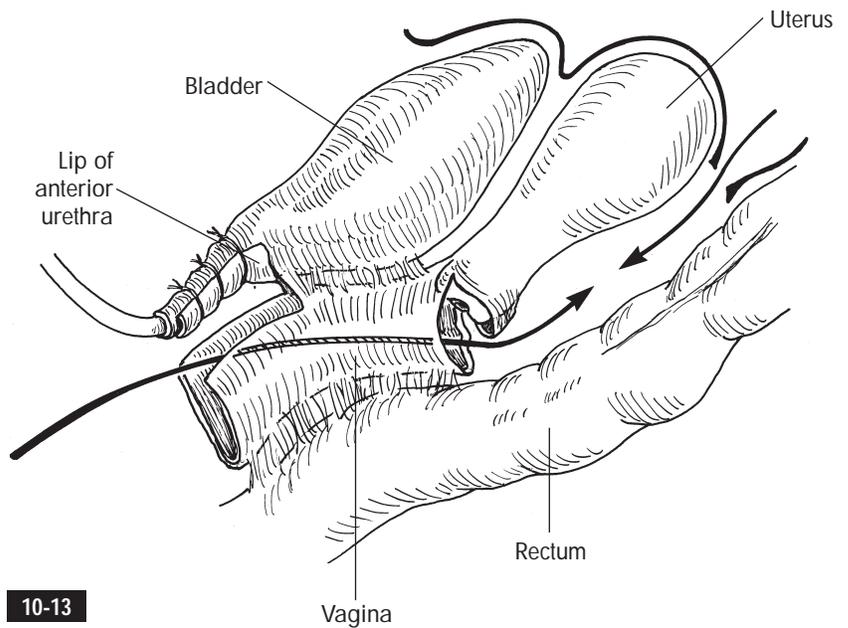
FIG. 10-12. Three ties (0 Vicryl) are passed around the urethra and Foley catheter and tied. The urethra, the lip of the anterior vaginal epithelium, and the dorsal venous complex are essentially tied as one unit.

The remaining attachments to the distal urethral meatus are ligated and divided to free the urethra entirely. The Foley catheter and urethra are retracted up into the pelvis. When freeing the urethra, the surgeon may encounter venous bleeding from the rich vascular plexus on either side of the urethra and within the pelvic fascial complex. Figure-of-eight



10-12

Joining of Distal and Proximal Dissections (Lateral View)



10-13

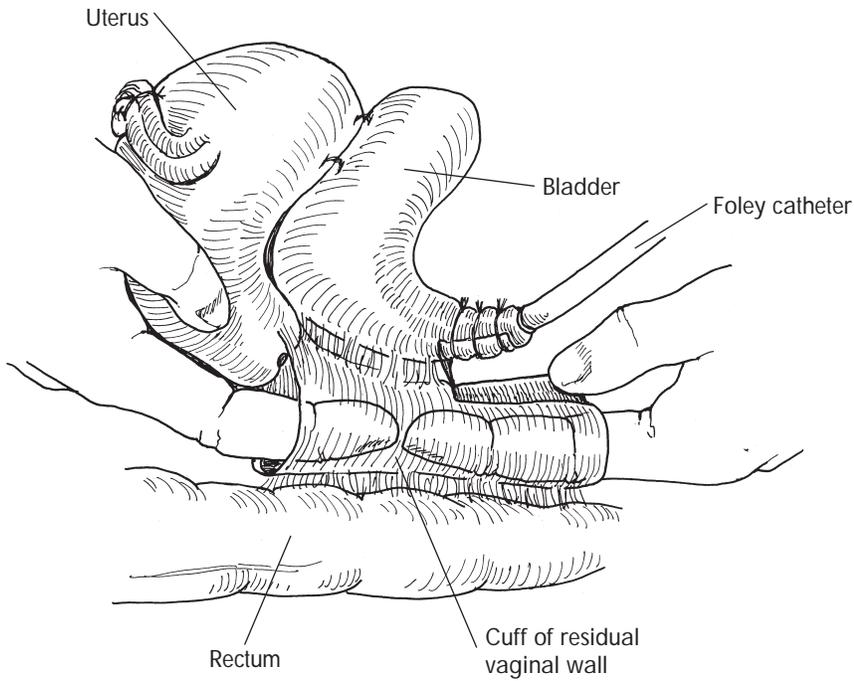
stitches on both sides are helpful in controlling venous bleeding.

FIG. 10-13. This connection thus establishes a communication between the distal vaginal opening and the proximal vaginal opening from above.

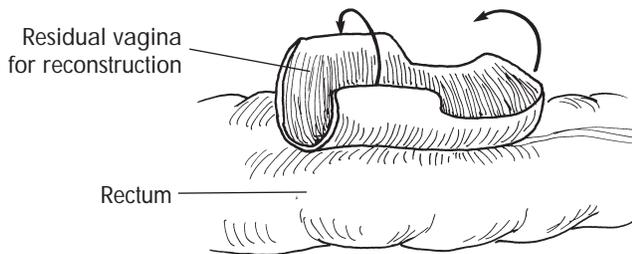
FIG. 10-14. The two lateral walls of the vagina are incised along with the posterior bladder pedicles and the uterine sacral ligaments. Whether using scissors or an electrocautery device to divide the attachments, the surgeon must protect the rectum by placing the fingers above it.

FIGS. 10-15 AND 10-16. The remaining vaginal wall can be reconstructed to form a tubular structure. The surgeon should suspend the proximal neovagina to the Cooper's ligaments bilaterally, thus obviating future herniation and prolapse.

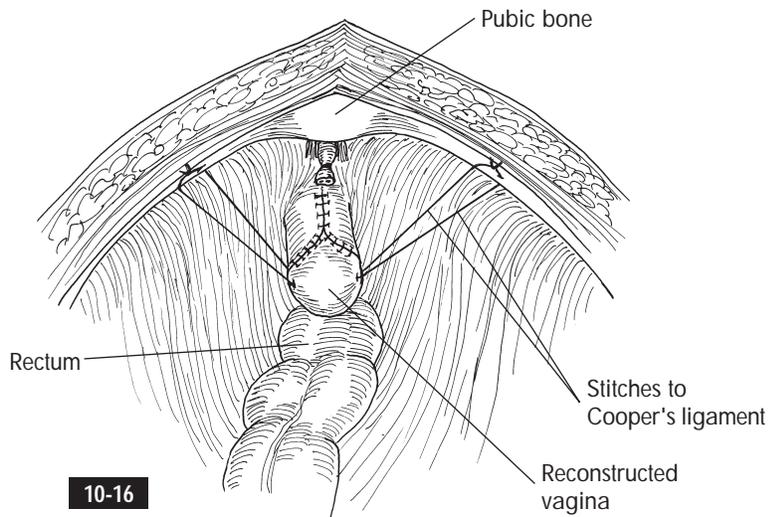
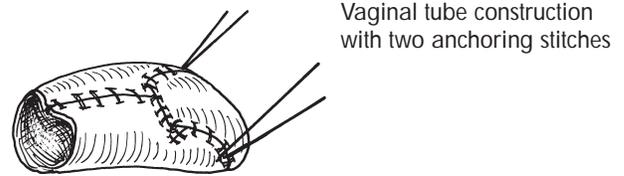
Lateral View



10-14

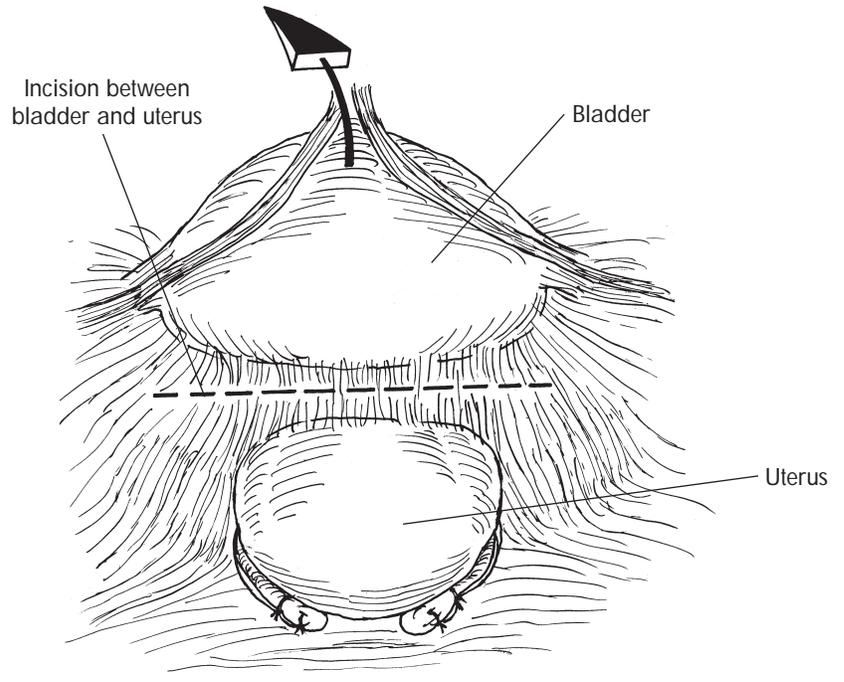


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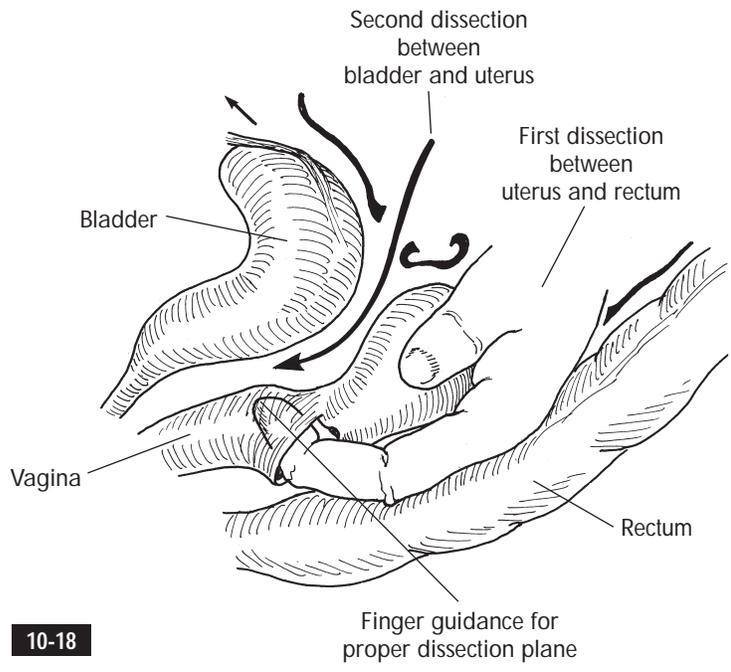


10-16

Dissection for Maximal Preservation of Vagina



10-17



10-18

PRESERVATION OF ANTERIOR VAGINA

In sexually active women who have limited disease confined to the anterior or anterolateral bladder, it is reasonable to preserve the anterior vagina and still perform an effective cancer operation. However, if there is any indication of tumor extension toward the anterior vaginal wall during the dissection, then the surgeon should excise the vaginal wall with the bladder as previously described.

FIG. 10-17. To preserve more of the anterior vagina, the surgeon must first establish a dissection plane between the bladder and the anterior vaginal wall.

FIG. 10-18. By inserting the left fingers into the vagina, the surgeon can perform this dissection with the right hand from above while constantly feeling for the

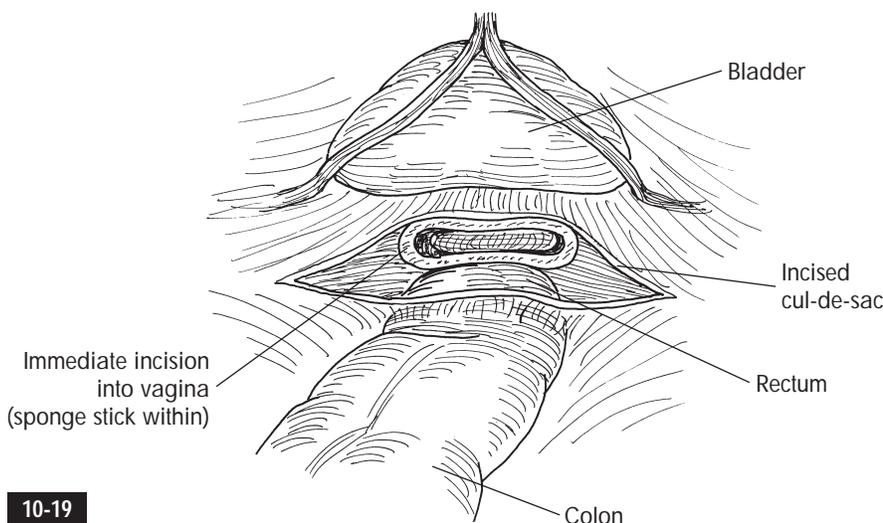
fingers on the other side of the vagina.

This maneuver can be incorporated with the proximal and distal vaginal dissection to preserve as much of the vagina as possible.

PROXIMAL VAGINAL DISSECTION IN POSTHYSTERECTOMY PATIENT

FIG. 10-19. In patients in whom hysterectomy has been previously performed and in whom scarring has obliterated the clear space between the rectum and the site of the previous uterus, the surgeon should carefully open the peritoneum at the cul-de-sac and immediately incise the vaginal wall at the site at which the sponge stick is palpable. This maneuver quickly establishes the proximal opening of the vagina without any chance of rectal injury.

Posthysterectomy Retrovesical Dissection



KEY POINTS

- The suspensory ligaments, ovarian vessels, round ligaments, and broad ligaments are divided.
- The posterior peritoneum between the rectum and the uterus is divided to develop the proper plane.
- The rectum is separated from the uterus and a proximal opening is made in the vagina at the site at which a sponge stick can be palpated through the proximal vaginal wall.
- The lateral bladder pedicles are divided.
- Distal urethral dissection is performed, and the fascial layers are punctured through the endopelvic fascia. This maneuver can be performed first before making the abdominal incision.
- Distal urethral dissection and division are performed.
- The lateral vaginal walls and the uterine sacral ligament are incised.
- The vagina is reconstructed.

POTENTIAL PROBLEMS

- *Injury to hypogastric vein during lateral bladder pedicle ligation and division:* Tie off the hypogastric vein distally and proximally
- *GIA stapling of lateral bladder pedicle causes residual arterial bleeding:* Stitch the bleeding sites
- *Bleeding from dorsal venous complex:* Apply figure-of-eight stitches
- *Bleeding from incised vaginal wall:* Repair with absorbable running stitch
- *Rectal injury during dissection of vaginal wall:* Perform primary repair → create colostomy (see p. 268)

SUGGESTED READINGS

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