



Seldinger technique workshop

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Prepackaged Catheter kit

Tunneling stylet

Guidewire

Dilator/peel away sheath

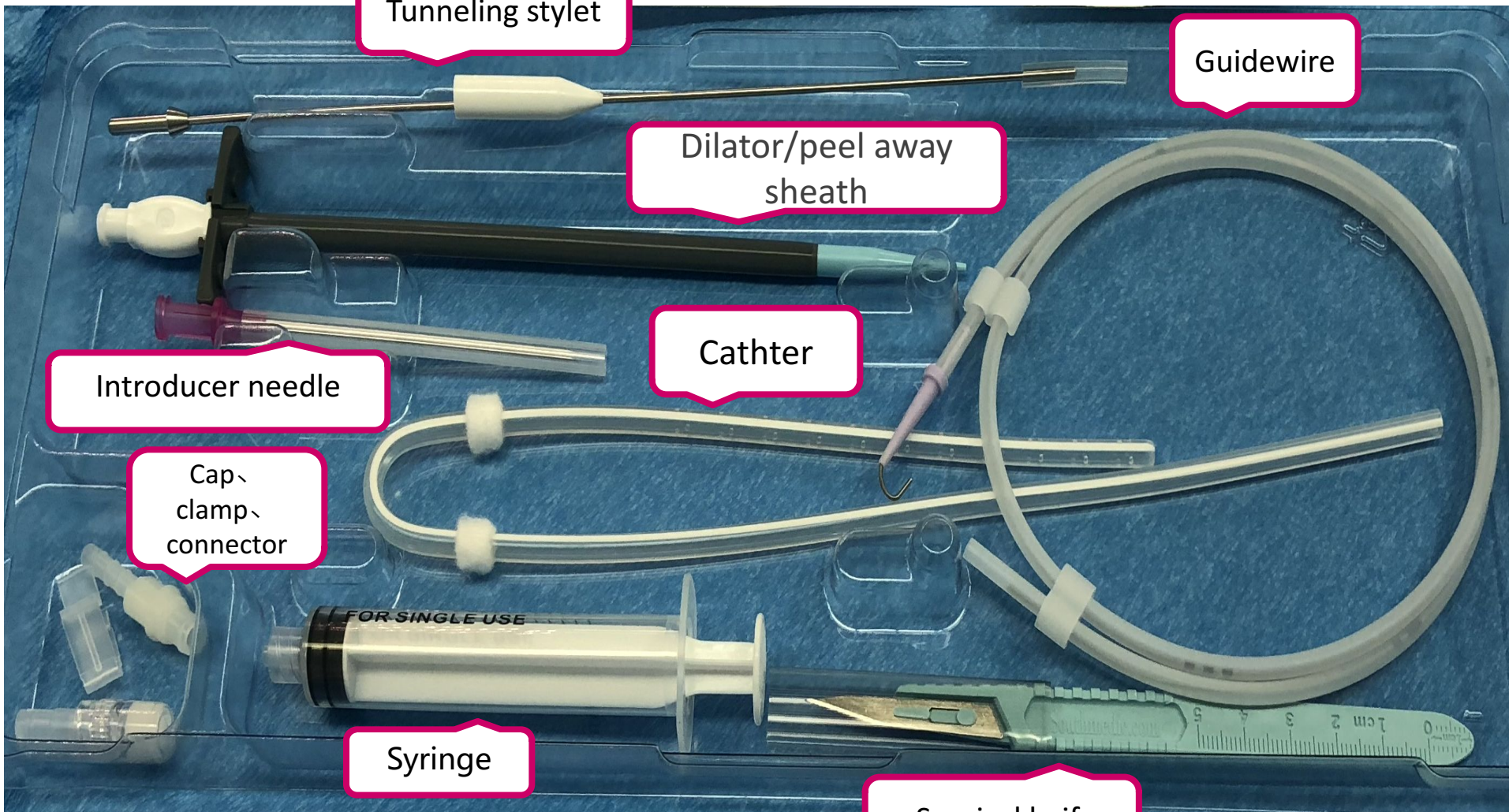
Introducer needle

Cathter

Cap-
clamp-
connector

Syringe

Surgical knife





Preoperative care

1. Evaluate patients' conditions.
2. Obtain written consent.



Preoperative care

3. Skin preparation.

- Shower on the day or the day before the procedure with antibacterial cleanser to wash carefully the planned surgical area.
- Shaving of abdominal hair if necessary.

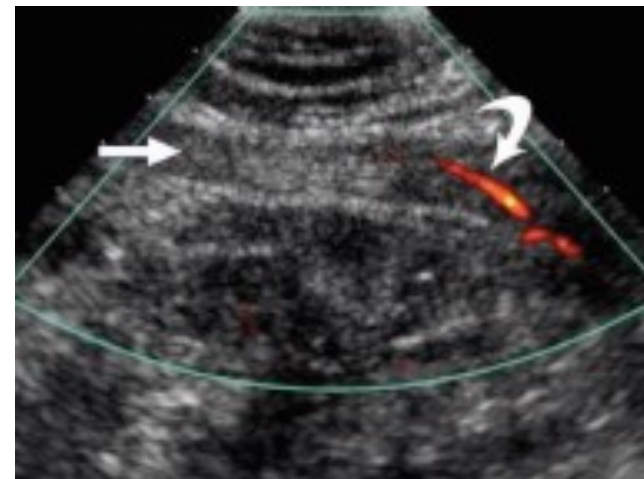
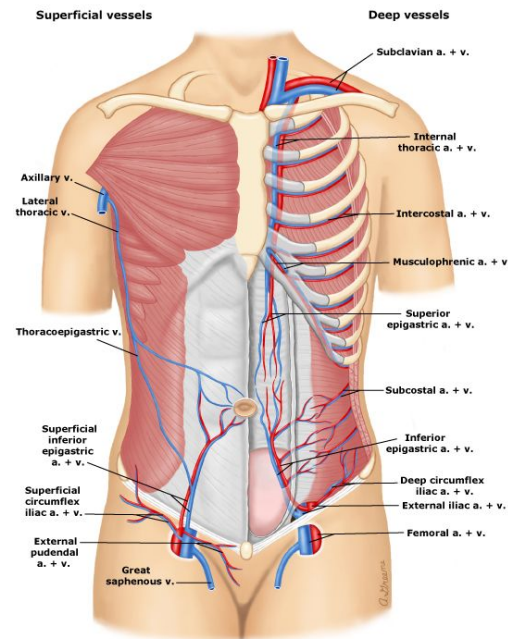
4. Select appropriate catheter.



Marking of exit site & incision point

5. Marking of exit site & incision point

- Ultrasound evaluation is recommended to avoid the inferior epigastric vessels and determine the insertion point.





Marking of exit site & incision point

- Determined and marked with the patient in an upright position.
- Mark 10-12 cm above the upper border of pubic symphysis as incision, 2-3 cm paramedian
- Exit site should be pointing downwards and laterally
- External cuff 2-4 cm from exit site

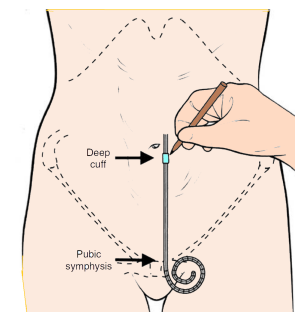
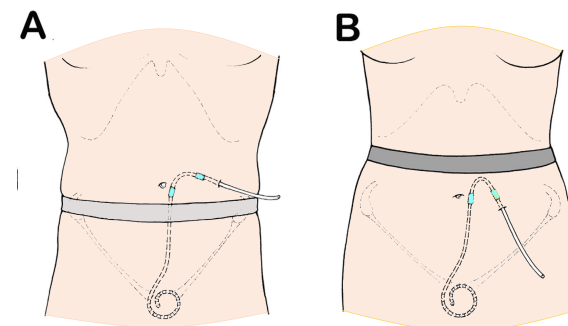


Figure 9 | Schematic drawing indicating the manner in which the catheter insertion site and deep cuff location are selected in order to achieve proper pelvic position of the coiled catheter tip.





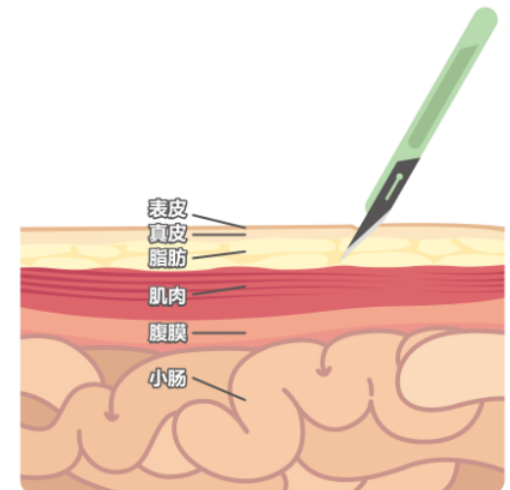
Preoperative care

6. Empty bowel and bladder, avoid constipation. Laxatives or enema, if necessary.
7. Antibiotics prophylaxis: first-generation cephalosporin 1g IV 1hr before procedure.
8. Sedative & analgesic if necessary: meperidine 50mg and diazepam 10mg 30mins before procedure.



Procedures

1. Surgical site is prepped with suitable antiseptic agent and sterile drapes applied around the surgical field.
2. Local anesthesia with 1% lidocaine.
3. Make a 2.0-3.0cm incision at the selected site.
4. Use blunt dissection to expose the anterior rectus sheath.
5. Anesthesia the puncture path with 1% lidocaine.

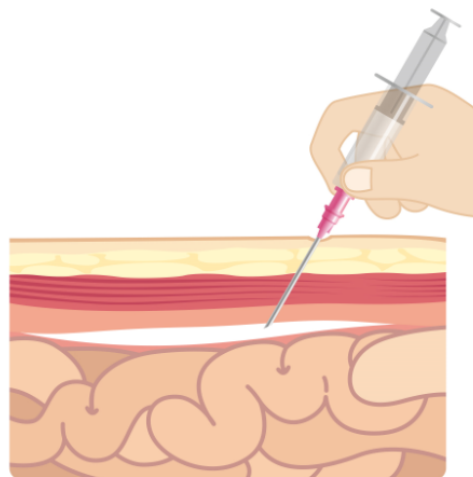
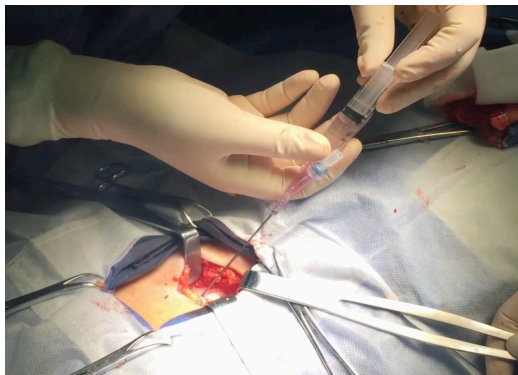




Procedures

6. Attach the introducer needle to a 10cc syringe filled with saline. Insert the needle at a 45 degree angle through the anterior rectus sheath into the peritoneal cavity and carefully inject the saline. Loss of resistance indicates the needle tip is in the peritoneal cavity.

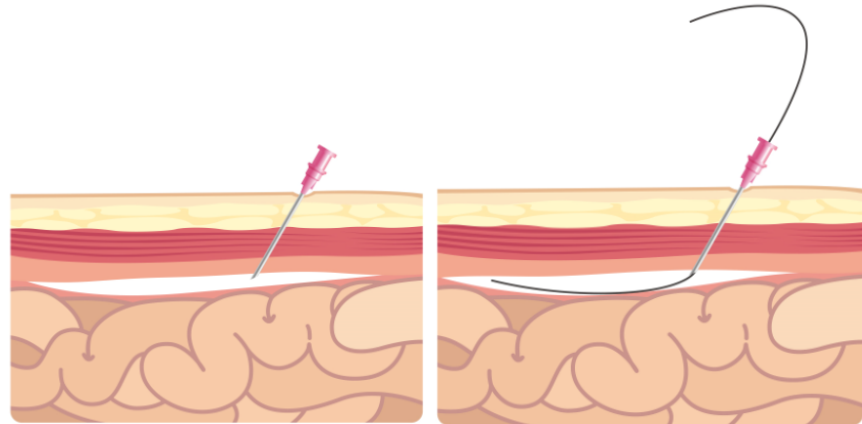
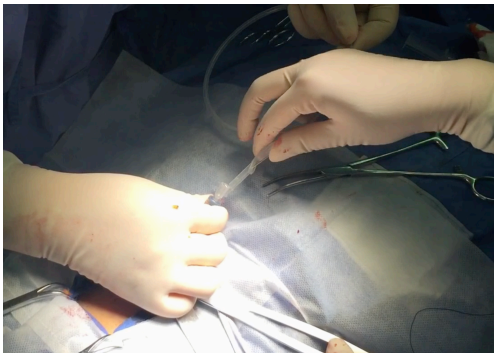
Caution: do not advance further, it could injury the viscera.





Procedures

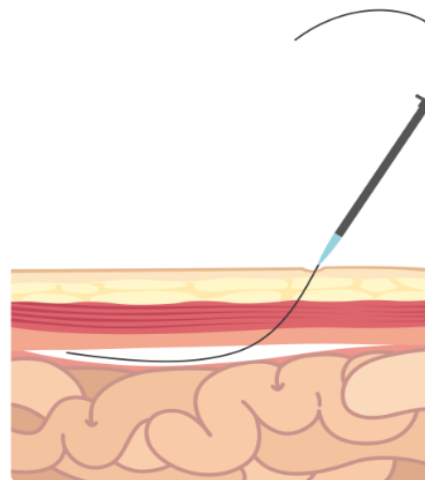
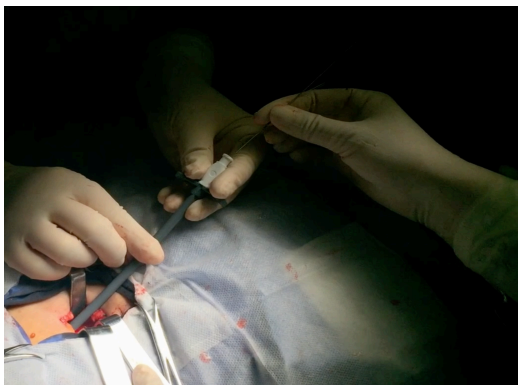
7. Remove the syringe, hold the introducer needle and inject saline through the needle.
8. Insert the flexible end of the guidewire through the introducer needle, directing it caudally, advance the wire approximately 18cm.





Procedures

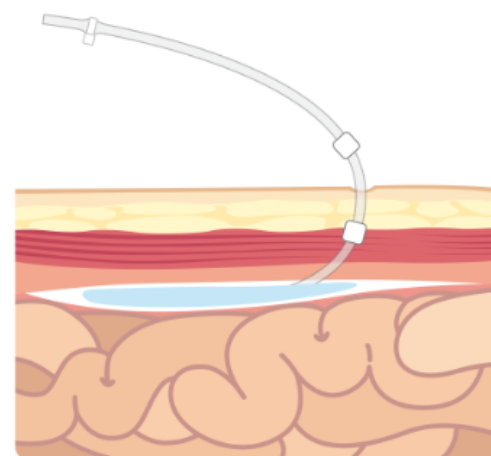
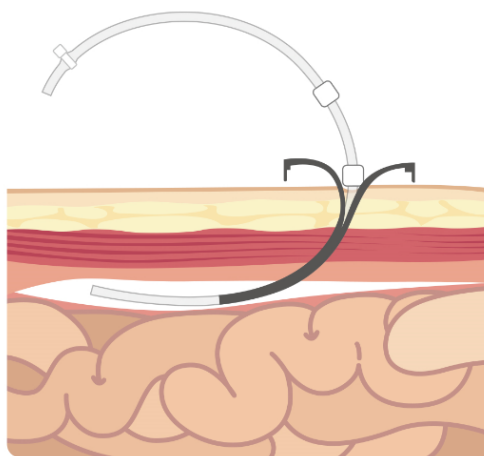
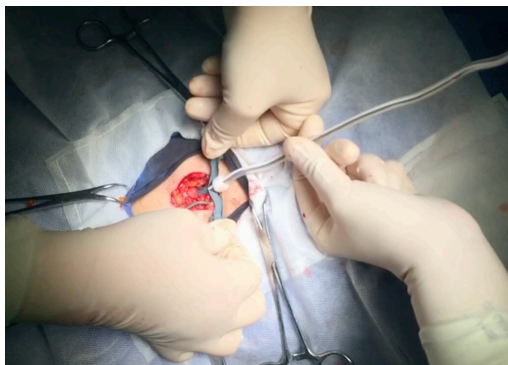
9. Withdraw the introducer needle, leaving the guidewire in the peritoneum.
10. Check that the dilator is locked within the peel away sheath to prevent the separation of the two components during insertion.
11. Insert the dilator/peel away sheath over the end of the guidewire gently. During insertion, ensure that the guidewire passage back and forth smoothly.
12. Hold the sheath in place and gently remove the dilator and guidewire.





Procedures

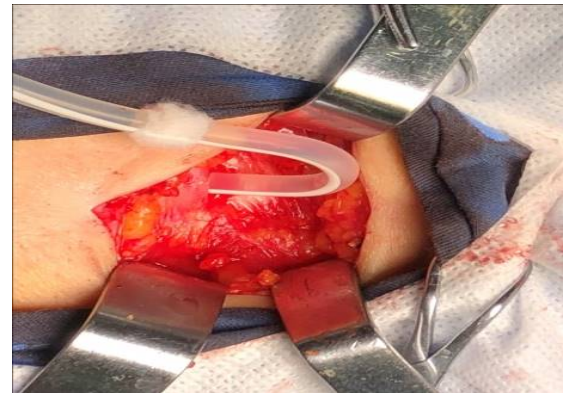
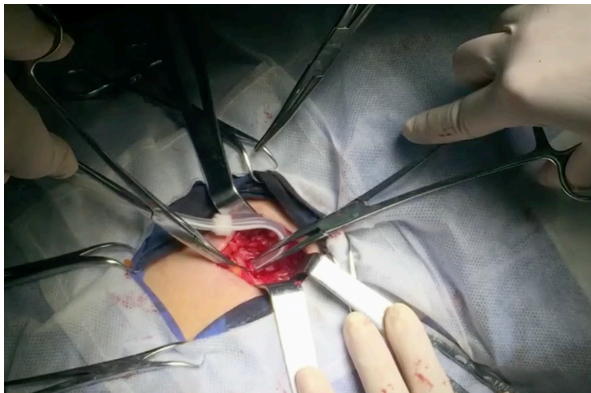
13. Soak the catheter in sterile saline. Gently squeeze the cuffs to expel air. Thread the catheter onto a stylet. To protect the bowels, 2cm of the catheter overlaps the tip of the stylet.
14. Insert the catheter with catheter stylet into the sheath, directing towards the desired position.
15. Grasp the tabs of the sheath, while holding the catheter in place, peel the sheath outward from the catheter. Remove the stylet.
16. Confirming drainage by infusing and draining dialysate.





Procedures

17. Place the deep cuff into the rectus sheath.
18. Local anesthesia the position of exit site. Create a subcutaneous tunnel. No suturing in exit site. Ensure that there are no kinks or twists in the catheter. Squeeze blood from the tunnel.





Procedures

19. Check catheter function again by infusing and draining dialysate after creating the subcutaneous tunnel. Then attach the adapter and transfer set, assure the security of all connections.
20. Close the subcutaneous tissue and the incision.
21. Place several layers of sterile gauze dressings on the wound.
22. The catheter is immobilized using a dressing or tape.

Thank you!

