

Abdominal Paracentesis

Introduction:

To access the peritoneal cavity or to sample its contents. It can provide diagnostic or therapeutic benefit without operative procedure.

Indications:

- Diagnosis of intraperitoneal bleeding and hollow viscus perforation
- Therapeutic purposes
- Ascites
- Spontaneous bacterial peritonitis
- Relief of respiratory compromise
- Relief of abdominal pain and discomfort

Contraindications:

- Coagulopathy
- Thrombocytopenia
- Bowel obstruction
- Pregnancy
- Infected skin or soft tissue at entry site

Equipments:

- Sterile prep solution
- Sterile towels
- Sterile gloves
- 5 and 20-ml syringes
- 22 and 25-gauge needles
- 3-way stopcock, IV tubing
- IV catheter (diagnostic: 20-gauge, therapeutic: 18-gauge) or long 16-gauge (CVP-type) catheter with J wire
- Vacuum bottles and IV drip set (for therapeutic paracentesis)

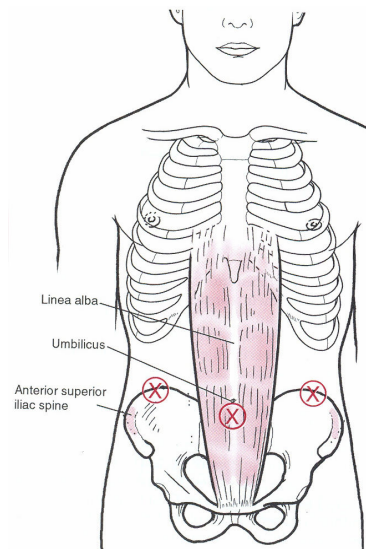
Technique:

Diagnostic Sampling

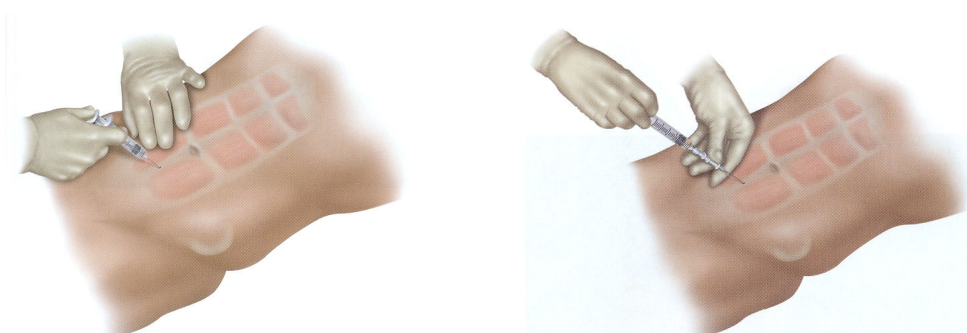
1. Have the patient empty the bladder
2. Place the patient in a supine semirecumbent position.

3. Identify the appropriate site: Not be site of a prior incision, free of gross contamination and infection. Preferred sites of entry to prevent bleeding from epigastric vessels:

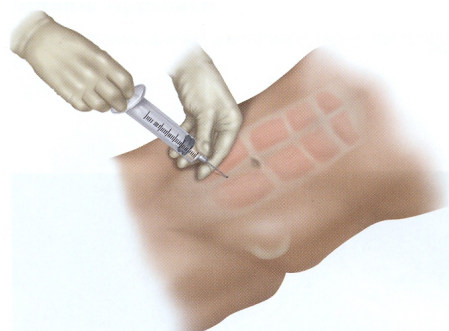
- Either lower quadrant (anterior iliac spine)
- Lateral to the rectus muscle and at the level of or just below the umbilicus
- Infraumbilicallly in the midline



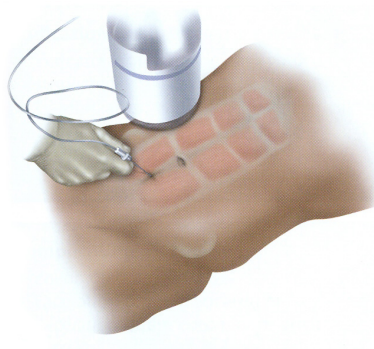
4. Percuss to confirm the presence of fluid and the absence of underlying bowel.
5. Prepare site with sterile solution and drape with sterile towels.
6. Anesthetize the skin at site of entry.
7. Attach the catheter to the syringe and insert at a 70-90 degree angle to the skin.



8. Advance the catheter while gently aspirating until ascitic fluid is obtained. Draw 20-30 ml of fluid into a sterile syringe for culture, including AFB, clinical chemistry and cytology.



9. For a *therapeutic tap*, attach one end of the tubing to the catheter and the other by needle to a vacuum container bottle.



10. Remove catheter. Clean skin with alcohol, Apply tape.

Complication and Prevention:

- **Pneumoperitoneum:**
Produces no complications, but adds difficulty to the interpretation of x - rays.
- **Bowel perforation:**
Do not place catheter through surgical scars, advance catheter under direct vision.
- **Bladder perforation:**
The patient should empty his or her bladder prior to the procedure or foley catheter should be placed.
- **Hypotension:**
IV hydration (colloid-based fluid is often used).
- **Persistent ascites leak:**
Skin entry site may be sutured to minimize leak.
- **Intraperitoneal bleeding:**

- Insert catheter gently.

Checklist for Abdominal Paracentesis

1. Checks patient's name and hospital number
2. Assembles correct equipment in the tray
3. Greets and introduces oneself to the patient
4. Explains procedure and gets verbal consent
5. Being sure about emptiness of bladder then asks the patient to lie down
6. Preferres sites of entry with attention to some points (Not be sites of vessle or prior incision , free of gross contamination & infection)
7. Washes hands and wears gloves
8. Cleans the skin with antiseptic solution
9. Numbs the skin and abdominal wall
10. Attaches the catheter to the syringe at an oblique angle
11. Aspirates as the needle is advanced till free flow of fluid occur
12. Advances the catheter then removes the needle
13. Aspirates 20-30 ml of fluid . Removes catheter
14. Cleans skin and applies tape
15. Thanks and listens to patient's questions
16. Sends the aspirated fluid in appropriately labelled sterile containers to the laboratory
17. Follows through patient and knows how the result of aspiration are used in management