

Bladder Aspiration

Introduction:

Bladder Aspiration is a procedure in which a needle is inserted through the abdominal wall into the bladder to obtain a urine specimen.

Indications:

- Patient less than 2 years of age
- Phimosis in male patient
- Urethral stricture in male patient
- Chronic urethral infection

Contraindications:

- Empty bladder (nonpalpable in adults, voiding within last hour in children)
- Previous lower abdominal surgery with scarring

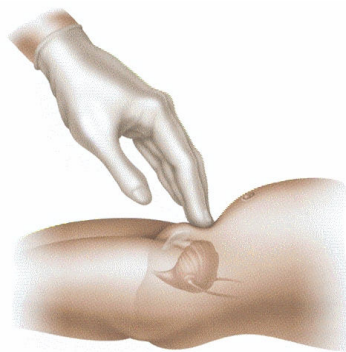
Equipment:

- Betadine antiseptic solution
- 22-gauge 1 ½ - inch needle (for pediatric patient)
- Sterile 5-or 10-ml syringe
- Local anesthetic (1% Lidocaine)
- Syringe and needles
- Sterile gloves

Technique :

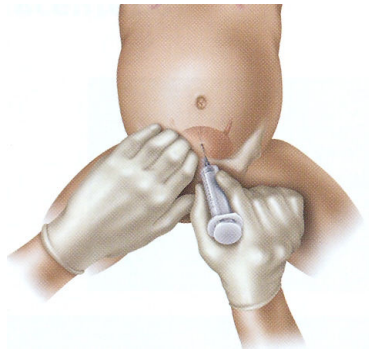
Pediatric Patient:

1. Place the child in frog-legged position.
2. Identify the insertion site at midline and 2 cm cephalad to the pubic bone.

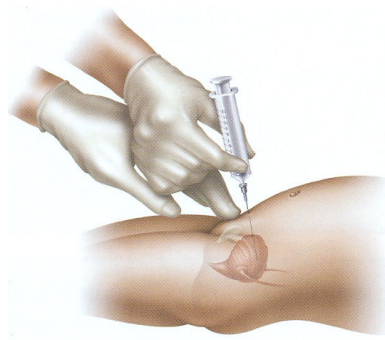


3. Prepare the area in sterile fashion.

4. At the insertion site, introduce the 22-gauge 1 ½ -inch needle attached to the 5-ml syringe.



5. Direct the needle in the cephalad direction (the bladder is an abdominal organ in infants) at a 10° to 20° angle from the perpendicular at midline.



6. Gently aspirate while introducing the needle.
7. If no urine is aspirated, withdraw the needle to the subcutaneous space and readvance it in a slightly different direction, 10° more caudad or cephalad.
8. Once urine is obtained, remove the needle.
9. Dress the wound.

Adult patient:

1. With the patient in the supine position, palpate the bladder (as it is full) and identify the insertion site at midline and 2cm cephalad to the pubic bone.
2. Prepare the area in sterile fashion.
3. Inject local anesthetic subcutaneously to raise a wheal at the insertion site.
4. At the insertion site, introduce the 22-gauge 3-inch needle attached to the

10-ml syringe.

5. Direct the needle caudad (the bladder is a peritoneal organ in adult) at a 10° to 20° angle from the perpendicular at midline.
6. Gently aspirate while introducing the needle.
7. If no urine is aspirated, withdraw the needle to the subcutaneous space and readvance in a slightly different direction, 10° more caudad or cephalad.
8. Once urine is obtained, remove the needle.
9. Dress the wound.

Complications:

- Microscopic hematuria (gross hematuria is uncommon)
- Bowel perforation
- Failure to obtain urine

Note: Ultrasound can be used as an adjunct to guide needle placement.
Do not pass the needle more than three times.

Checklist for Bladder Aspiration

1. Checks patient's name and hospital number
2. Assembles correct equipments in the tray
3. Greets and introduces oneself to patient
4. Explains procedure and gets verbal consent
5. Mentions handwashing
6. Positions the patient
7. Identifies the insertion site
8. Uses sterile gloves
9. Preps the area
10. Asks somebody to restrict the patient, if the patient is not cooperative
11. Injects local anesthetic in adult patient
12. Introduces needle attached to syringe at midline in sterile fashion
13. Directs the needle caudad at a 10° to 20° angle from the prependicular area
14. Aspirates gently, while introducing the needle
15. If no urine is aspirated, withdraws the needle to the subcutaneous space and readvance (Not more than three times)
16. Removes the needle and dresses the wound
17. Lables the tube of urine
18. Removes and discards gloves
19. Asks the personnel to send the specimen to laboratory quickly, if it's not possible, takes it in refrigerator
20. Thanks and listen to patient's questions