ABSTRACT

The purpose of this document was to define the correct technique for obtaining a urine sample from a urostomy, ileal, or colon conduit. While healthcare providers do not commonly encounter patients with a urostomy, knowledge of the correct procedure to obtain a urine specimen is essential. Urine samples obtained incorrectly from a urostomy can lead to inaccurate cultures, resulting in an improper diagnosis and treatment, which can endanger the life of a patient. This column presents patient preparation, the procedure to obtain a specimen with and without a catheter, and aftercare of the patient and specimen. This best practice guideline has been developed by a panel of certified ostomy nurses serving on the Wound, Ostomy and Continence Nurses (WOCN) Society’s Clinical Practice Ostomy Committee. The guideline has undergone content validation through a consensus-building process by the WOCN Society, which was managed by the Center for Clinical Investigation.

KEY WORDS: urinary tract infection, urine culture, urine sample collection, urine specimen collection, urine specimen handling, urostomy

Purpose

To obtain an uncontaminated specimen for laboratory analysis:

- A clean uncontaminated specimen is necessary for accurate laboratory analysis (urine culture).
- Specimens from the urostomy sample often have bacteria; ensure that the specimen obtained is not contaminated.

Introduction

The number of people with a urostomy in America is not clearly known; reports estimate the range from 150,000 to 250,000. One of the most common complications associated with a urostomy are urinary tract infections. Due to the small number of people with a urostomy, clinicians may not be familiar with the correct technique to obtain a urine sample from a stoma to test for a urinary tract infection. Incorrect sampling techniques may lead to inaccurate culture results and then lead to inappropriate diagnosis and treatment. This document provides a quick and easy resource for correct technique with and without the use of a catheter.
The most accurate method of collecting a urine sample for culture, according to limited sources, is the use of a double lumen sterile catheter inserted directly into the stoma. Specimens for culture should never be obtained directly from the urostomy pouch or bedside drainage bag.

Antibiotic therapy—it is recommended to use caution when considering antibiotics to treat urinary infection for patients with a urostomy:

- “Patients should only commence antibiotic therapy if they are symptomatic.”
- “In the case of ileal conduit or continent urinary diversion, bacteriuria is practically always present, and measurements taken to eradicate the bacterial carriage are fruitless.”
- “The detection of urinary infection in these patients is difficult because the ileal loops are almost always colonized. Asymptomatic bacteriuria in the presence of a ureteroileal conduit should not be treated and prophylactic antibiotics are not recommended. Positive urine cultures associated with physical findings of fever, chills, and flank pain should prompt initiation of appropriate bactericidal antibiotics.”

**Patient Preparation**

- In patients with 1-piece pouch system, the urostomy pouch system is completely removed, the specimen collected, and a new pouch system placed.
- In patients with 2-piece pouch systems, one of the following options may be chosen:
  - The urostomy pouch is removed from the skin barrier flange (wafer), the specimen collected, and the pouch replaced.
  - The urostomy pouch system is completely removed, the specimen collected, and a new pouch system is placed.

**Procedure When Catheter Is Available**

**Supplies**

- Cleansing solution. Check institutional policy. Further research is needed on the use of antiseptic solutions versus sterile water or saline for cleaning prior to catheter insertion. Some of the solutions recommended are povidone-iodine, chlorhexidine, soap, and water.
- Sterile 4 x 4 gauze.
- If a double catheter is not available, a straight catheter may be used. Faller and Lawrence suggest the use of a 16Fr catheter to allow for mucous drainage.
- Sterile specimen container with lid, label, and laboratory bag.
- Sterile and clean gloves.
- New pouch system.
- Soft paper towels and/or wash cloths for cleaning prior to replacing pouch.

**Procedure**

1. Explain procedure to patient.
2. Wash hands and use standard precautions.
3. Don clean gloves.
4. Open the supplies, and maintain sterility.
5. Remove pouch and dispose per the institutional policy.
6. Wash hands.
7. Don sterile gloves.
8. Use sterile technique.
9. Cleanse the stoma with cleansing solution, using a circular motion from stoma opening outward.
10. Blot the stoma with sterile gauze.
11. Place the open end of catheter into the specimen container.
12. If using a straight catheter, lubricate the catheter with a water-soluble lubricant. Gently insert the catheter tip no more than 2 to 3 inches (5.0-7.5 cm) into the stoma (never force—if resistance is detected, rotate catheter until it slides).
13. Hold catheter in position until urine begins to drip. Collect approximately 5 to 10 mL of urine before removing catheter. Collecting a sufficient amount of urine may take 5 to 15 minutes.
14. Clean and dry the stoma and peristomal skin.
15. Discard supplies according to the institutional policy.

**Procedure to Use If a Catheter Is Not Readily Available**

**Supplies**

- Cleansing solution. Check the institutional policy. Further research is needed on the use of antiseptic solutions versus sterile water or saline for cleaning prior to catheter insertion. Some of the solutions recommended are povidone-iodine, chlorhexidine, soap, and water.
- Sterile 4 x 4 gauze.
- Sterile specimen container with lid, label, and laboratory specimen bag.
- Sterile and clean gloves.
- Soft paper towels and/or wash cloths for cleaning prior to replacing pouch.
- New pouching system.
Procedure

1. Explain procedure to patient.
2. Wash hands and use standard precautions.
3. Don clean gloves.
4. Open the supplies, and maintain sterility.
5. Remove pouch, and dispose per the institutional policy.
6. Wash hands.
7. Don sterile gloves.
8. Use sterile technique.
9. Cleanse the stoma with cleansing solution, using a circular motion from stoma opening outward.  
10. Blot the stoma with sterile gauze.
11. Discard the first few drops of urine by allowing urine to drip onto sterile gauze.
12. Hold the sterile specimen cup under the stoma. Collect approximately 5 to 10 mL of urine. Collecting a sufficient amount of urine may take 5 to 15 minutes.
13. Clean and dry the stoma and peristomal skin.
14. Discard supplies according to the institutional policy.

Aftercare

- Place a lid on the specimen container label: note on the label that the specimen is from a urostomy stoma, and put in a laboratory transport bag.
- Apply ostomy pouching system.
- Bring the specimen to lab within 1 hour. In the home care setting, if unable to deliver specimen in 24 hours, refrigerate the specimen and deliver within 24 hours.

- Document in the patient’s record:
  - Procedure and observations.
  - Instructions given to the patient/caregiver.

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References


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