

Routine STD Examination of the Male Patient

Learning Objectives

Upon completion of this content the learner will be able to:

1. List the equipment needed for a routine targeted male STD examination.
2. State the steps, in appropriate order, for conducting a complete routine male exam.
3. Describe the principal normal and abnormal findings relevant to an STD exam to be noted at each step of the male exam.
4. Discuss the correct technique in obtaining lab specimens for gonococcal and chlamydial testing and urethral Gram stains.
5. Conduct a male STD examination, specimen collection, and behavioral counseling with 90% completeness.

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I. Preparation

- A. Prepare items needed for examination:
 - 1. Adjustable high-quality exam light.
 - 2. Gloves.
 - 3. Cotton/dacron swabs. Calcium alginate swabs.
 - 4. Cotton-tipped applicators.
 - 5. Glass slide.
 - 6. Tongue blades.
 - 7. Culture media or other diagnostic test kits for gonorrhea, chlamydia, herpes.
 - 8. Other test kits.
 - 9. Clear plastic anoscope.
 - 10. Water-soluble lubricant.
 - 11. Amplified DNA probe test kits for chlamydia and gonorrhea.
 - 12. Chart, laboratory forms, labels, etc. for documentation.
 - 13. Metric rulers for characterization and documentation of dimensions of lesions.
- B. Label all specimens and slides.
- C. Wash hands.
- D. Put on gloves.
- E. Explain to patient what to expect.
- F. Ask about previous experience with exams (discomfort, fainting) if any.

II. Exam Technique Considerations

- A. Develop a standard technique for handling clean and contaminated articles and for following universal precautions:
 - 1. One hand clean, one hand contaminated, remaining consistent throughout the exam.
 - 2. Two hands gloved, removing one glove before touching any other surface area.
- B. Touch a "non-genital" area of the body first.
- C. Make eye contact.
- D. Talk to the patient during the exam.

- E. Watch for signs of fainting (e.g., pallor, sweaty palms, weak knees, excessive perspiration).
- F. Avoid lengthy discussions when patient is in the exam position.
- G. Remove exam light off of genital area as soon as possible.
- H. Examine painful areas last.

III. The Exam

A. General inspection and skin exam:

1. Inspect face, trunk, and legs.
2. Inspect exposed skin, hands, palms, and forearms.
3. Inspect soles of feet if syphilis is suspected.
4. Look for lesions, rashes, discoloration.

B. Oral exam:

1. Inspect mouth, including lips, tongue, tonsils, hard and soft palate, and gum lines.
2. Note presence of oral infections, e.g., thrush, hairy leukoplakia, lesions, mucous patches, discoloration, oral HSV, Kaposi's sarcoma, etc.
3. Obtain specimen for gonorrhea testing if indicated by history of performing oral sex on another male. Swab tonsillar areas and posterior pharynx.

C. Palpate axillary, cervical, epitrochlear and sublingual lymph nodes.

D. Genital exam:

1. Instruct patient to stand and lower pants/underpants to knees to expose genitalia and inguinal area.
2. Palpate inguinal lymph nodes for fluctuance, swelling and tenderness.
3. Inspect pubic hair/skin for scabies, lice, nits and lesions.
4. Palpate scrotal contents by gently compressing each testis and epididymis and spermatic cord between your thumb and first two fingers:
 - a) Note tenderness, shape, masses, hernias, swelling, or presence of nodules.

- b) Identify spermatic cord with its vas deferens and epididymis; note tenderness, swelling, or mass.
5. Examine penis:
 - a) Inspect skin.
 - b) Retract or ask patient to retract the foreskin, if present.
 - c) Inspect glans for ulcers, raised lesions, or signs of inflammation.
 - d) Compress glans gently between your thumb and index finger to open the urethral meatus.
 - e) If no discharge is visible, strip or milk the shaft of the penis from the base to the glans.
 - f) Inspect meatus for stenosis, lesions, urethral position.
 6. Obtain appropriate laboratory specimens:
 - a) Obtain a sample of urethral discharge for urethral Gram stain. See Appendix A.
 - b) Other specimens (saline microscopy, HSV culture, darkfield or DFA-TP from lesion, KOH, GC and/or CT calcium alginate swab for culture) as indicated.
 - c) First-void urine specimen for gonorrhea/chlamydia amplified DNA tests, leukocyte esterase (LE), microscopy, as indicated.
 - d) Be sure to change gloves between potentially infected sites to avoid cross contamination.

E. Examine anus and perineum:

1. The exam may be performed in the lithotomy position or by asking the patient to bend forward with hands positioned to the back to spread the buttocks apart.
1. Examine perianal areas and intergluteal cleft for lesions, rashes, discharge, and fissures. Inspect the anus and perianal areas.
2. Spread apart anus with your fingers to look for ulcers, discharge.
3. Obtain gonorrhea and/or chlamydia rectal culture (if indicated by ano-receptive sex) by inserting cotton swab into the anus about 2 cm.
4. Other specimens (HSV culture, darkfield or DFA-TP from lesion) as indicated.
5. Internal palpation (for abscess, fissures, masses, etc.), as indicated.
6. Anoscopic exam should be considered for patients with anorectal symptoms and a recent history of engaging in receptive anal sex to visualize lesions and obtain specimens for Gram stain and gonococcal cultures. See Appendix A.

7. Rectal specimens should be collected prior to contamination with lubricant.

IV. References

1. Bates B. A Guide to Physical examination and history taking. 5th ed. Philadelphia: JB Lippincott, 1991:369-385.
2. Seidel HM. Mosby's Guide to Physical Examination. 3rd ed. St. Louis, Mo: Mosby, 1995.
3. Tanagho E, McAninch J. Smith's general urology. 14th ed. Norwalk, Conn: Appleton and Lange. 1995:43-44.

Commonly Used Stat Tests: Useful Tips GRAM STAIN FOR MICROORGANISMS

Test Principles

The Gram stain is the most commonly used stain in bacteriology. It is classified as a differential stain and serves to distinguish the Gram-positive from the Gram-negative bacteria. The original Gram stain technique has been modified a number of times, and the usual recommended procedure is the Hucker modification.

Although the Gram stain is among the least complicated and least time-consuming of all microbiological tests, the information that may be obtained from a properly stained smear of a specimen from a client is one of the most valuable aids to the clinician and the laboratorian. A properly performed stain can provide important diagnostic information concerning the type of organisms present, and the therapy to initiate while waiting for other test results. In the stat STD laboratory setting, the Gram stain is used to aid in the diagnosis of gonorrhea, candidal vulvovaginitis, and bacterial vaginosis, and in the assessment of urethritis, cervicitis, and other infections characterized by infected discharge. Both the numbers of polymorphonuclear leukocytes (PMNs) and microbial flora present can be assessed (Stamm, 1988).

Specimen Collection

Male urethral smear

Patient should not urinate prior to specimen collection. Insert a small swab into the urethra.

Rectal smear

Use an anoscope to collect the specimen and sample areas containing pus.

Smear Preparation

To prepare a direct smear from a patient, roll swab with patient's specimen on a clean glass slide, making a thin spread; do not smear (leukocytes may be disrupted) or prepare a thin smear from a culture in a drop of water on the slide. Air dry the smear and fix to the glass by rapidly passing the slide through a Bunsen burner flame two or three times. The slide should be slightly warm to the skin on the back of the hand. Do not use swab from a DNA probe or Pap smear for a Gram stain.

Staining Schedule

1. Stain smears with crystal violet ammonium oxalate.
2. Wash in tap water.
3. Apply Gram's iodine solution.
4. Wash in tap water.
5. Decolorize with 95% ethyl alcohol until washes are no longer blue.
6. Wash and shake off excess water.
7. Apply counterstain of safranin.
8. Wash in tap water and blot dry.

Examination of Slide and Interpretation of Results

1. Scan the stained smear with the 10X objective to locate the best area for viewing.
2. Examine the smear microscopically with the oil immersion objective.
3. Gram-positive organisms appear purple and Gram-negative organisms appear red. Search for organisms and count PMNs. Cells and mucus should stain pink. Yeast stain purple. Bacteria are characterized as Gram-positive (purple) or Gram-negative (pink) and as cocci (round), bacilli (rod shaped), or coccobacilli (in between rods and cocci).
4. Control slides of representative Gram-positive and Gram-negative organisms should be examined each time Gram stains are performed.

Note: If using commercial kits or reagents, follow manufacturer's instructions in the product insert.

Sources of Error

- Scrubbing, not rolling, the swab across the slide may destroy cellular morphology.
- Failure to heat-fix the slide may cause material to wash off during staining.
- Overheating the slide may cause artifacts to be stained and cells to be distorted.
- Use of Gram's iodine solution beyond expiration date (shelf life of reagent at room temperature is approximately 90 days).

- Over-decolorizing the slide may cause Gram-positive organisms to appear Gram-negative.
- Under-decolorizing the slide may cause Gram-negative organisms to appear Gram-positive.
- Reagents contaminated with microorganisms may give erroneous