UNIT 1: APPROACH TO THE PATIENT

Educational Topic 3: Pap Test and DNA Probes/Cultures

Rationale: The Pap smear is one of the most effective screening tests used in medicine today. Proper technique in performing the Pap smear and obtaining specimens for DNA probes and/or microbiologic culture will improve accuracy.

Intended Learning Outcomes:

A student should be able to:

- Perform a Pap smear
- Obtain specimens to detect sexually transmitted infections
- Explain the purpose of these tests to the patient

TEACHING CASE

CASE: JA is a 24-year-old G0 female who presents for an annual exam. She had a normal Pap smear reading with no intraepithelial lesion three years ago. She is currently sexually active with a new partner for the last 2 months, and has had four lifetime partners. She does not report any history of sexually transmitted diseases. She is currently using birth control pills for contraception. She is just finishing her menstrual cycle and is spotting; her periods are regular without problems. Her review of systems is negative. She smokes one pack of cigarettes per week; she does not drink and states that she has occasionally used marijuana. Her vitals and physical exam are normal.

COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:
Competencies addressed:

- Patient Care
- Medical Knowledge
- Interpersonal and Communication Skills
- Professionalism

1. How are cervical samples for pap smears collected?
   - Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. Then swirl the spatula vigorously in the vial 10 times
• Insert the endo-brush into the cervix until only the bottommost fibers are exposed. Slowly rotate 1/4 or 1/2 turn in one direction. DO NOT OVER-ROTATE. Then swirl the spatula vigorously in the vial 10 times.

2. What are the different laboratory techniques available to perform a pap smear?
   • Discuss conventional Pap smear and Thin Prep: Both are collected from the endocervical canal and transformation zone with spatula and cytobrush or cytobroom. Thin prep is the most widely used technique.
   • Discuss the importance of properly labeling specimens, including patient’s LMP and sending it off to the lab promptly.

3. In addition to performing a Pap smear, what other tests might you recommend for this patient, and how do you proceed to obtain them?
   • Since the patient is sexually active with a new partner, you should offer her screening for sexually transmitted diseases including gonorrhea and chlamydia. All sexually active patients under the age of 25 should be screened annually for chlamydia and gonorrhea. Screening for gonorrhea and chlamydia does not require a speculum exam as they can be tested from a urine sample.
   • To collect an endocervical sample, wipe any excess cervical mucous and insert the DNA probe in the endocervical canal.

4. How often does this patient need to undergo a Pap smear?
   • A patient who is between the ages of 21-30 only needs a pap test every three years. Patients who have had an abnormal Pap smear previously will need more frequent Pap smears based on the actual abnormality. This patient needs to continue to have Pap smears every 3 years, assuming this one is normal.

5. What risk factors does this patient have for cervical dysplasia and cancer?
   • Multiple partners, sexual activity at an early age, cigarette smoking.

6. If while performing the speculum exam, you notice a gross lesion on the cervix, what would your next step in management be?
   • Any gross lesion on the cervix will need to be directly biopsied as Pap smears have a false negative rate and cervical cancer might be missed.

7. What other counseling or advice do you need to discuss with this patient?
   • Discuss the importance of cervical cancer screening guidelines. Offer the patient blood testing for other sexually transmitted infections such as syphilis, HIV, and hepatitis B and C. Discuss the importance of safe sex practices including condom use.
   • Discuss the indications and risks/benefits of an HPV vaccine such as Gardasil. HPV vaccination is recommended for all females between 9 and 26 to reduce the incidence of cervical cancer.
REFERENCES

