Unit 5: Neoplasia

Educational Topic 52: Cervical Disease and Neoplasia

Rationale: Early recognition and proper evaluation of pre-invasive cervical disease and cancer can reduce morbidity and mortality.

Intended Learning Outcomes:
A student should be able to:

• Describe the pathogenesis of cervical cancer
• Identify the risk factors for cervical neoplasia and cancer
• List the guidelines for cervical cancer screening
• Describe the initial management of a patient with an abnormal Pap test
• Describe the symptoms and physical findings of a patient with cervical cancer

TEACHING CASE

CASE: A generally healthy 26-year-old G1P0 woman with a last menstrual period approximately 16 weeks ago is referred for the management of an abnormal Pap test showing High Grade Squamous Intraepithelial Lesion (HGSIL). This Pap test was obtained 10 weeks ago when she underwent an elective termination of an unplanned pregnancy at approximately six weeks of gestation. She has not had any prior Pap tests. She has never been tested for sexually transmitted infections. The combination of the undesired pregnancy and the abnormal Pap test, however, has been a “wake-up call” and today she requests testing for “everything.” She received Depo-Provera at the time of the termination, and has not had a period yet. She reports a history of normal, regular menses and has used oral contraceptives inconsistently in the past. She began having sexual intercourse at the age of 17, and has had 4 lifetime partners. She is on no other medications and has no known drug allergies. Her family history is notable for a grandmother with breast cancer. She smokes ½ pack of cigarettes per day, does clerical work for a moving company, and is engaged to be married in 6 months.
COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:

Competencies addressed:
- Patient Care
- Medical Knowledge
- Systems-based practice

1. According to recent guidelines published by the American College of Obstetricians and Gynecologists (2012), how many Pap tests should this patient have had given her age and clinical history?
   - First cytology should be obtained at age 21 regardless of coitarche.
   - Between the ages of 21 and 29, there is no benefit to annual screening; screening with cytology alone every 3 years is recommended. It leads to harm due to overtreatment of screen detected abnormalities.
   - Women ages 30–65 years should be screened with cytology and HPV testing (“cotesting”) every 5 years (preferred) or cytology alone every 3 years.
   - Women over 65 years of age with evidence of adequate negative prior screening and no history of CIN2+ within the last 20 years should not be screened for cervical cancer with any modality. Once screening is discontinued it should not resume for any reason, even if a woman reports having a new sexual partner.
   - This patient should have had only two screening pap tests by now.

2. Which historical risk factors does this patient have for having cervical dysplasia or for having cervical dysplasia progress to cervical cancer?
   - She has poor compliance with screening, early age of coitarche (>19 years of age), and is a cigarette smoker
   - Abnormal Pap test is presumptive evidence of HPV infection
   - She is at risk of other sexually transmitted infections given her lack of barrier contraception, including HIV/AIDS
   - Number of lifetime sexual partners
   - Low socio-economic status and poor access to healthcare

3. What are other possible risk factors for development of cervical dysplasia?
   - She probably does not have an autoimmune disease, given her generally healthy medical history. Other diagnoses that would increase her risk of cervical neoplasia include SLE, and history of organ transplantation on immunosuppressive therapies.
   - DES exposure
   - HIV infection

4. What is meant by the term "high-grade squamous intraepithelial lesion"?
   - Each Pap test report should have a statement of specimen adequacy (satisfactory, unsatisfactory), general categorization (negative for intraepithelial lesion or malignancy, epithelial cell abnormality, other), and interpretation/result (negative for intraepithelial lesion or malignancy, epithelial cell abnormalities). Possible Pap test results include: ASCUS, ASC-H, LGSIL, HGSIL, AGC, AIS, and squamous cell carcinoma.
   - Each category of abnormal cytologic reading encompasses a spectrum of possible correlating pathologic (histologic) diagnosis that should be further explored and identified. In this case, the finding of HGSIL encompasses moderate and severe dysplasia, carcinoma in situ (CIN 2 and CIN 3).

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• Cells were identified on cytology (Pap test) suggesting abnormal cellular maturation between 1/3 and full thickness of the squamous epithelial layer of the cervix.

5. What would you recommend as the next step in the evaluation of this patient's abnormal Pap test?

• Abnormal Pap test results require further work-up, typically to establish a diagnosis. This patient will require colposcopy and directed biopsies, including an endocervical curettage (ECC). Once a diagnosis is made based on these findings, appropriate treatment can then be recommended.

• Available algorithms for abnormal cytologic and pathologic cervical neoplasia are detailed from ASCCP (see references).

• Patient should also be counseled about STI testing (including HIV), smoking cessation, and use of barrier contraception.

6. Would typing for the human papilloma virus (HPV) aid in the management of this patient?

• HPV testing should not be used to screen women between the ages of 21-29, either as a stand-alone test or as a cotest with cytology. In this patient with HSIL, there is no role for HPV testing, as the result is expected to be positive. This patient requires colposcopic examination. For LSIL, HPV can be expected to be positive in 77% of cases, making this test impractical in deciding to triage to colposcopy.

• Low risk HPV types include 6 and 11, are associated with cervical warts. High risk HPV types include 16 and 18, are associated with high grade cervical dysplasia and cervical cancer.

REFERENCES


