Thanks to a thorough and effective television and print marketing campaign, women are asking their physicians more and more about human papillomavirus (HPV) and cervical cancer. Although the distribution of new data about HPV is starting to dispel many old myths, confusion continues to exist regarding this virus and the cervical intraepithelial neoplasia (CIN) and cervical cancer that it causes.

The September 2008 issue of AOA’s Women and Wellness described the treatment of patients who have abnormal results on the cervical cytology screening test (ie, Pap smear), including special issues surrounding women younger than age 26.

The current article focuses on the American Society for Colposcopy and Cervical Pathology (ASCCP) consensus guidelines for special issues facing women older than age 30, particularly with respect to HPV, cervical dysplasia and cervical cancer.

To briefly reiterate information from the previous AOA’s Women and Wellness articles, the ASCCP guidelines for the management of abnormal results on cervical cytology screening, which can be found in their entirety at the ASCCP Web site (www.asccp.org), recommend that women younger than age 30 have annual gynecologic examinations and cervical cytology screening.

Epidemiology
Although the prevalence of HPV infection decreases after age 35,1 the virus is at its most dangerous in these years. Only one-third of women older than age 30 clear their HPV infections, compared with two-thirds of women aged 24 or younger.1

The median age of diagnosis for cervical cancer is 48 years,2 and an estimated 60% of those cancers are diagnosed in women who have either never been screened or have not been screened in the past five years.3 Cervical cancer is one of the top two causes of death among women in developing countries,4 and each year it takes approximately 3,800 lives in the United States.2

The maximum prevalence of HPV infection occurs between the ages of 20 and 24 years.1 The prevalence then decreases until age 35, after which it plateaus off until age 50, at which point it begins to decrease again.1

Revised ASCCP guidelines
One hundred forty-six experts convened at the National Institutes of Health in Bethesda, Md, in 2006 to review and revise the ASCCP guidelines for the treatment of women with abnormal results on cervical cancer screening. The new recommendations state that high-risk HPV DNA (deoxyribonucleic acid) testing should be performed in conjunction with cervical cytology screening in all women older than age 30.5

If the cytology screening result is negative and the HPV DNA test result is negative, both tests should be repeated after no less than three years. If the cytology screening result is negative and HPV DNA test result is positive, then both tests should be performed again in 12 months. If a second negative cytology screening result and a second positive HPV DNA test result is obtained 12 months after the initial results, then colposcopy is warranted. An abnormal cytology screening result at any time is also an indication for colposcopy.5

Women who are pregnant
Based on the changes to the ASCCP guidelines,5 certain recommendations are now made regarding cervical cytology screening for women who are pregnant. First, all pregnant patients should undergo cervical cytology screening at the time of the initial prenatal visit.6 Second, if the patient is older than age 30 and the cytology screening result at the initial prenatal visit is negative and the HPV DNA test result is positive, then screening should be repeated at the first postpartum visit, which occurs six weeks after delivery.6 However, if the patient is older than age 30 and the cytology screening result and the HPV DNA test result are both negative, then the screening does not have to be repeated at the six-week postpartum visit and can be deferred for three years or more.6

Pregnant women who have a diagnosis of low-grade squamous intraepithelial lesion can be managed in one of two ways, according to the revised ASCCP guidelines.5

In one method, colposcopy can be performed in the second trimester, when any lesion suspected of being high-grade CIN (ie, CIN 2 or 3) can be biopsied. Alternatively, the colposcopy can be deferred until the six-week postpartum visit.5 This recommendation is a change from the original guidelines, which encouraged colposcopy
immediately after an abnormal finding on a Pap smear.

**Women who have had hysterectomies**

Even with the advent of less invasive surgical techniques for many of the common indications for hysterectomy, more than 600,000 hysterectomies are performed in the United States every year, and approximately 1 in 3 US women have had a hysterectomy by age 60.\(^7\)

According to the American College of Obstetricians and Gynecologists (ACOG), women who have had a total hysterectomy (ie, removal of cervix and uterus) and have no history of high-grade CIN may discontinue cytology screening. However, women who have a history of high-grade CIN or women for whom CIN history is not documented should be screened every year until three consecutive negative cervical cytology results have been obtained. Routine screening can then be discontinued for these women.\(^8\)

**Women older than age 65**

The incidence of cervical cancer tends to decrease with increasing age, after peaking when women are in their mid- to late 40s, when the incidence is approximately 24%.\(^2\) Between the ages of 65 and 74, the incidence drops to 10.4%; between ages 75 and 84, to 6.8%; and after age 84, to 2.5%.\(^2\) The question remains, when should we discontinue cytology screening for our older populations?

There are differing recommendations regarding this question from different groups. The American Cancer Society recommends that screening be stopped after age 70 in low-risk populations.\(^9\) Age 65 is the upper limit of screening according to the US Preventive Services Task Force.\(^10\) The ACOG believes that the decision to stop screening should be made by the physician on a case-by-case basis.\(^8\)

When deciding to stop routine screening for your patients, the following points should be kept in mind:

- A woman, no matter her age, who is sexually active and has had multiple partners is at risk for acquiring HPV infection and subsequently developing CIN and possibly carcinoma.
- A woman with a history of abnormal cytology screening results is at risk for cervical cancer later in life.
- African American and Hispanic women have a higher incidence of cervical cancer than do women of other races/ethnicities across all age groups.\(^2\)
- Most new cases of cervical cancer are found in unscreened or infrequently screened populations.\(^3\)

**Women with HIV**

The ACOG guidelines state that women with human immunodeficiency virus (HIV) infection should be screened twice in the first year after diagnosis and annually thereafter, regardless of age or HPV DNA test results. Patients with any cytologic abnormalities that are found on routine screening should be treated, according to ASCCP guidelines, similarly to patients without HIV infection. Of note, similar recommendations apply to any patient who is immunosuppressed or who was exposed to diethylstilbestrol in utero.

**Management of CIN**

In certain situations, the histologic diagnosis of CIN 2 or 3 requires treatment of the patient to prevent progressive and possibly invasive disease. There are two major categories of treatments for patients with CIN—ablative and excisional.

Ablative treatments involve using an energy source to destroy any visible dysplastic lesion on the surface of the cervix. Before attempting an ablative procedure, it is important that disease in the cervical canal be ruled out, that invasive disease is not found, and that the entire lesion is clearly visible.\(^11\)

The two most commonly performed ablative techniques are cryotherapy and laser ablation. Cryotherapy involves the application of a liquid nitrogen or gaseous carbon dioxide cryoprobe to the dysplastic area of the cervix. This application freezes the lesion, thereby destroying it. Laser ablation is the use of a laser to vaporize the dysplastic lesion. This technique has been shown to be as effective as cryotherapy, but it requires expertise with a laser.\(^11\)
The two most commonly performed excisional procedures for the treatment of patients with CIN are the loop electrical excision procedure (LEEP) and cold knife conization.

The loop electrical excision procedure involves the use of a heated loop of thin wire that is used to excise the dysplastic area of cervix. Multiple sizes of wire loops are available, and the procedure can be performed in the outpatient setting. 

Cold knife conization is performed by using a scalpel to remove the abnormal area of cervix. This procedure should be chosen instead of LEEP when invasive lesions are suspected. With a cold knife cone, there is no cautery artifact at the margins of the specimen, thereby facilitating pathologic diagnosis.

Management of cervical cancer

According to data from the National Cancer Institute’s Surveillance Epidemiology and End Results program, the median age of death from cervical cancer between 2001 and 2005 was 57 years. As previously stated, most cases of cervical cancer are found in women who have never been screened or in women who have not been screened in at least five years. Patients tend to present complaining of watery vaginal discharge, intermittent spotting, or postcoital bleeding.

Risk factors for the development of cervical cancer include history of intercourse at an early age, multiple sexual partners, having a male partner who has had multiple sexual partners, history of sexually transmitted diseases, history of cervical/vulvar dysplasia, immunosuppression and smoking.

The stage of cervical cancer can be clinically determined by using a combination of physical examination, histologic findings from biopsy specimens, hysteroscopy, cystoscopy, proctoscopy, intravenous pyelogram examination and radiographic examination of the lungs and skeleton.

Early-stage disease can be managed surgically with either conization of the cervix, total abdominal hysterectomy, or radical hysterectomy with lymphadenectomy, depending on the exact stage. Cervical cancer that has progressed to stage IIb or beyond is no longer considered amenable to surgical intervention. In such cases, a combination of radiation and chemotherapy, most commonly using cisplatin and fluorouracil, is the mainstay of treatment.

Final notes

There are many nuances to the management of HPV infection, cervical dysplasia and cervical cancer in women who are older than age 30. However, with proper understanding of the current ASCCP guidelines and recommendations, practitioners can offer their patients the highest level of effective care.

References


