A study of HPV typing for the management of HPV-positive ASC-US cervical cytologic results

Reviewed by: Thomas C. Wright Jr., MD

Interpretation:

HPV testing is now a well-established as an integral component of cervical cancer screening. In the US, almost all women 25 years and older with an ASC-US cytology result are triaged using HPV testing. Similarly, since the joint American Cancer Society/ASCCP 2012 cervical cancer screening guidelines made co-testing with both cervical cytology and HPV testing the preferred approach to screening women 30 years and older, there has been widespread adoption of co-testing for screening in this age group. The availability of genotyping assays for HPV 16 and 18 has made co-testing even more attractive since genotyping allows us to identify HPV positive women with negative cytology results who are at greatest risk for having CIN 3 or invasive cervical cancer which we refer to as CIN 3+. Since HPV 16 positive women have a 3 year cumulative risk of CIN 3+ of about 25%, they should be referred for immediate colposcopy. Although the risk of CIN 3+ is somewhat lower in HPV 18 positive women, these women also benefit from immediate colposcopy because of their risk of invasive cervical cancer.

Recently HPV genotyping assays have been introduced in Europe and Asia that allow genotypes other
than HPV 16 and 18 to be specifically identified. These assays are called "extended genotyping" assays. The clinical utility of one of these assays was recently evaluated in women with ASC-US who were HPV positive. This was a large Kaiser Permanente study that followed these women up for 3 years. The study found that the risk of CIN 3+ was 16% for HPV 16 and 7.4% for HPV 18. Women positive for HPV 31 and 33/58 combined had a risk of CIN 3+ similar to that for HPV 18. It is important to note that in this study women positive for the other high-risk HPV genotypes had a much lower risk of CIN 3+, it was less than 5%. The risk of CIN 3+ was 2-4% for women positive for HPV 45, 51, or 52. Risk was only 1-2% for women with HPV 35, 39, 56, 59, 66, and 68.

Current management guidelines recommend that all HPV positive women with ASC-US be referred to colposcopy who have a 3-year risk of CIN 3+ of 5% or higher. Using a 5% 3-year risk of CIN 3+ as the threshold for colposcopy, the authors of the Kaiser study conclude that women with ASC-US infected with HPV 35, 39, 51, 56, 59, 66, and 68 have a low enough risk that they could be retested in 12 months to allow time for viral clearance to occur. If this approach was taken, it would eliminate the need for immediate colposcopy in a considerable number of women who have ASCUS who are HPV positive.