Are the 2001 Bethesda Criteria for Cervical Cytology Adequate to Identify Low-Grade Cervical Intraepithelial Neoplasia in Postmenopausal Women?

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Older women have a high rate of false-positive cervical cytology specimens. Our goal was to determine which cytologic features most accurately identify low-grade cervical intraepithelial neoplasia (CIN-1) in the postmenopausal population (over age 50) and whether these features differ from those seen in younger women. A search of our pathology database from the past 5 years identified 55 postmenopausal women with biopsy-proven CIN-1. We also selected 55 cases of biopsy-proven CIN-1 from premenopausal women. Preceding liquid-based cervical cytology specimens were reviewed for diagnostic features of LSIL, adapted from the 2001 Bethesda Criteria. High-risk HPV DNA testing results were also obtained. A similar range of cytologic diagnoses was rendered for postmenopausal (post) women (8 NILM, 9 ASC-US, 36 LSIL, 1 ASC-H, 1 HSIL) and premenopausal (pre) women (5 NILM, 17 ASC-US, 33 LSIL). Diagnostic features most often present were nuclear enlargement (87% post vs 89% pre) and nuclear membrane irregularity (80% post vs 89% pre). Koilocytes were infrequently present (42% post vs 44% pre). HPV testing was common in cases of NILM or ASC-US, and overall testing rates were 69% in the post group and 58% in the pre group. Pre- and postmenopausal women with biopsy-proven CIN-1 have similar cytologic changes on pap smear. Koilocytic cells are an easily identifiable feature of LSIL, but the majority of cases in both groups did not show this finding. Nuclear enlargement and membrane irregularity were common, but the threshold for diagnosing these features as ASC-US versus LSIL is subjective. Reflex HPV testing can ensure that patients with ASC-US appropriately proceed to colposcopy. Our study suggests that the Bethesda criteria are as effective to screen for CIN-1 in postmenopausal patients as in premenopausal patients, but that both groups benefit from the addition of HPV testing in borderline cases.

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Am J Clin Pathol 2013;140:A003