

Is endocervical curettage really useful in assessing mildly abnormal cytology?

Yes—in women over 40.

This analysis of data from the multicenter ASCUS-LSIL Triage Study (ALTS) found endocervical curettage (ECC) to be of questionable value as an ancillary diagnostic technique to colposcopically directed biopsy in women under age 40. In women age 40 or older, however, the sensitivity of colposcopic biopsy decreased and the sensitivity of ECC increased, so ECC may be of value in assessing mildly abnormal cytology in this population.

EXPERT COMMENTARY

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Routine ECC as part of the colposcopy exam is controversial. Many colposcopists perform ECC with every colposcopy in nonpregnant patients. The rationale is that it will increase the sensitivity of the overall exam. A recent study by Pretorius and colleagues lends support to this view. The authors diagnosed high-grade dysplasia—CIN 2,3—based on ECC specimens alone in 20 of 364 women (5.5%) who had satisfactory colposcopy exams.¹

The opposing view holds that squamous dysplasia arises at the squamocolumnar junction and does not “skip” over apparently normal endocervical tissue to restart de novo within the canal. The proponents of this argument maintain that ECC adds little other than cost and discomfort when colposcopy is “satisfactory” or “adequate.”

Solomon and associates have contributed to this debate with their analysis of data from the ALTS trial, in which ECC was performed on 1,119 women,

41 (3.7%) of whom were diagnosed with CIN 2 or worse. In 10 of those women (0.89%), the diagnosis was based solely on the ECC.

More sensitive in older women

As in other analyses of colposcopy from the ALTS trial,² the sensitivity of colposcopy with biopsy was disappointingly low: 72.5%. Solomon and colleagues estimate that ECC adds an additional 3% overall to sensitivity. When stratified by age, however, this marginal increase was higher in women age 40 or older than it was in younger women—13% and 2.2%, respectively. In the Pretorius study already mentioned,¹ in which 5.5% of women were diagnosed with CIN 2 or worse solely on the basis of ECC, the mean age of the population was 42.

Weaknesses of the study

The study by Solomon and associates had several limitations, most of which were adequately discussed by the authors. ECC was performed at the discretion of the colposcopist; indications were not standardized. Moreover, the number of women age 40 and older was relatively small, and the study was not powered to address the issue of ECC and age.

Improvement in sensitivity is small but welcome in an older population

Older women are at higher risk of CIN 3 and unsatisfactory colposcopy and tend to have less accurate colposcopic impressions. Anything that can add to the sensitivity of colposcopy in this population is welcome. The authors point to the low utility of ECC in women under 40 and wisely stop short of recommending it in

Solomon D, Stoler M, Jeronimo J, Khan M, Castle P, Schiffman M. Diagnostic utility of endocervical curettage in women undergoing colposcopy for equivocal or low-grade cytologic abnormalities. Obstet Gynecol. 2007;110:288–295.

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In women age 40 or older, the sensitivity of colposcopic biopsy decreased and the sensitivity of ECC increased

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older women—although they come closer to such a recommendation in the abstract than in the body of the paper. This analysis of ALTS data certainly adds to the discussion of ECC, but more studies are clearly needed.

In the meantime, endocervical sampling with curettage or brush has an established role in colposcopy. It should be performed in women whose endocervical canal cannot be assessed, i.e., those with unsatisfactory colposcopy in whom an excision procedure is not otherwise planned. Endocervical sampling is also recommended as part of conservative management of women with high-grade squamous intraepithelial lesions on cytology but no cervical intraepithelial

neoplasia or worse on biopsy. Other indications include women with low-grade squamous intraepithelial lesions or atypical squamous cells of undetermined significance in whom no lesion is identified, and those with atypical glandular cells on cytology.³

References

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Moore K, Cofer A, Elliot L, Lanneau G, Walker J, Gold MA. Adolescent cervical dysplasia: histologic evaluation, treatment, and outcomes. *Am J Obstet Gynecol.* 2007;197:141.e1–141.e6.

Is excision required in adolescents with CIN 2 or higher on cervical cytology?

Not necessarily. In this chart review, 29% of adolescents with biopsy-proven cervical intraepithelial neoplasia (CIN) grades 2 or 3 opted for conservative treatment rather than excision. Over 18 months, the condition regressed in 65% of these patients, remained stable in 20%, and progressed without cancer in 5%. No invasive cancers developed.

Overall, CIN 2,3 was present in 35% of adolescent patients referred to colposcopy for cervical dysplasia.

EXPERT COMMENTARY

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Adolescents differ from adults in many ways—no surprise. Some of the less obvious differences are their tendency to have multiple sexual partners, which exposes

them to a number of human papillomavirus (HPV) types; the fact that most have not yet developed a protective immune response to the virus; and their larger, more active and vulnerable cervical transformation zone.

As a result, cytologic abnormalities are very common in adolescents shortly after they become sexually active. But although lesions develop very quickly, they regress just as rapidly. Low-grade squamous intraepithelial lesions (LSIL) regress in 70% to 94% of adolescents (usually in the first 24 months), and progress in only 3% to 7%.^{1,2} The rate of invasive cancer in adolescents is only 0.3 for every 100,000 individuals.³

In adults, HPV disease is more likely to progress and less likely to regress. Adolescents have primarily incident infection, whereas adults have a mixture of incident and prevalent infection—and prevalent infections are more likely to be persistent infections and less likely to regress over the short term than incident infections are.

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CIN 2 can be an unreliable diagnosis

Some patients with CIN 2 really have CIN 1,2 (often adolescents), whereas others have CIN 2,3 (often adults). That may be one reason CIN 2 is more likely to regress in adolescents than adults. Surprisingly, a recent study by Wright and colleagues⁴ found otherwise: Both the incidence and natural history of CIN 2 were similar in adults and adolescents. Moore and associates set out to validate these findings by reviewing medical records at the University of Oklahoma Health Science Center in Oklahoma City.

Details of the study

Patients were managed according to the 2001 guidelines of the American Society for Colposcopy and Cervical Pathology (ASCCP). Patients younger than 21 who had CIN 2,3 were offered conservative management or excision. Those who underwent immediate conization were compared with those who were followed at 4- to 6-month intervals:

- Of 501 patients identified in the colposcopy clinic, 146 (29%) underwent immediate conization, and 77 (53%) were found to have CIN 2.
- Of the 355 (71%) who were followed conservatively, data were available for 125 patients over a median of 18 months. Regression was reported in 56%, persistence in 35%, and progression in 14%.
- Of the 55 patients with CIN 2 who opted for conservative follow-up, data were available for 23 for a median of 18 months. Lesions persisted in 17% of this cohort and progressed in 13%. Excision of progressive or stable disease was eventually performed in 17%.

Regression more likely in adolescents

Adolescents and adults had similar rates of CIN 2 in this study, but lesions regressed at a much higher rate in adolescents. This supports the ASCCP's conservative but cautious recommendation regarding adolescents: Observation

Just how common is HPV among adolescents?

Approximately 80% of incident human papillomavirus (HPV) infections occur in adolescents and young women.^{5,6}

From studies of women attending college, it has been learned that almost 40% of those who are uninfected at the time they enter college become infected within 24 months after matriculation and almost 60% become infected within 60 months.^{7,8}

with colposcopy and cytology at 4- to 6-month intervals for 1 year is acceptable for biopsy-confirmed CIN 2, provided colposcopy is satisfactory, endocervical sampling is negative, and the patient accepts the risk of occult disease.

Perhaps the most revealing finding was that 100% of the 77 patients with CIN 2 who opted for immediate loop electrical excision procedure (LEEP) underwent conization. In the group managed conservatively, the corresponding figure was 17% of 23 patients. The implication: 83% of patients undergoing immediate LEEP might have been spared conization had they been followed more conservatively. ■

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CIN 2,3 regressed in 65% of adolescents who opted for conservative treatment rather than excision