Endocervical Curettage When Colposcopic Examination Is Satisfactory and Normal

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Objective: **To estimate the incidence of endocervical dysplasia in women with cervical cytology of atypical squamous cells of undetermined significance (ASCUS) or low-grade squamous intraepithelial lesion (SIL) who have a satisfactory and normal colposcopic examination.**

Methods: **An electronic colposcopy database was reviewed and women with satisfactory colposcopic examinations and original cervical cytology of ASCUS on two consecutive Papanicolaou smears, ASCUS favor SIL, or low-grade SIL were selected. Exclusion criteria were pregnancy, insufficient endocervical curettage (ECC), or colposcopic examination that showed an abnormality that required cervical biopsy. Subjects also were excluded if they were postmenopausal or had surgical or ablative therapy for cervical dysplasia within the past year. A computerized review of 2517 patient records found 860 that met the search criteria. A manual review of those records using the exclusion criteria isolated a study group of 159 women.**

Results: **Four of 159 subjects (2.5%, 95% confidence interval [CI] 0.69, 6.3) had dysplastic cells in endocervical curettings. In these four, the ECC specimens had benign endocervical cells and separate fragments of squamous cells with mild dysplasia. In three women, loop electrosurgical excision procedures showed mild dysplasia limited to the transformation zone. The fourth subject was believed to have contamination from an unrecognized ectocervical lesion and was treated conservatively. A repeat ECC found benign endocervical cells. Involvement of the endocervix by dyplasia was excluded in all but one of 159 patients (0.63%, 95% CI 0.02, 3.5).**

Conclusion: **Incidence of endocervical dysplasia was extremely low in women with cervical cytology of consecutive ASCUS, ASCUS favor SIL, or low-grade SIL who have a satisfactory and normal colposcopic examination. Our findings suggest that endocervical curettage might be safely avoided in those women. (Obstet Gynecol 2000;95:801–3.)**

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Endocervical curettage (ECC) is accepted as a standard component in the colposcopic evaluation of women with abnormal cervical cytology.[1–5] However, the value of routine ECC in all colposcopic examinations is not without controversy.[6–9] In women with satisfactory colposcopic examinations, the rate of squamous dysplasia in the endocervical curettings is reported to range from 1.4–17.9% (Table 1).[2,9] The wide disparity was explained by Spirtos et al,[12] who showed that positive ECC in a woman with a satisfactory colposcopic examination was most likely the result of contamination from an ectocervical lesion. The intent of this investigation was to estimate the incidence of squamous dysplasia within the endocervical curettings of women with a satisfactory and normal colposcopic examination who had original cervical cytology of atypical squamous cells of undetermined significance (ASCUS) on two consecutive Papanicolaou smears, ASCUS favor squamous intraepithelial lesion (SIL), or low-grade SIL. We believe that endocervical curettage might be unnecessary in that low-risk subgroup of patients.

Materials and Methods

We reviewed an electronic colposcopy database and selected patients with satisfactory colposcopic examina-

Table 1. Reported Frequency of Satisfactory Colposcopy and Positive Endocervical Curettage

Study	% Satisfactory	Positive ECC
Drescher et al[2]	82.0%	17.9%
Urcuyo et al[6]	54.1%	8.6%
Oyer and Hanjani[9]	71.0%	1.4%
Ostergard and Gondos[10]	56.0%	2.8%
Talebian et al[11]	95%	Not available
Saltzman et al[3]	89.4%	15.0%
Present study	84.0%	2.5%

ECC = endocervical curettage.

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tions and original cervical cytology of ASCUS on two consecutive Papanicolaou smears, ASCUS favor SIL, or low-grade SIL. Exclusion criteria were pregnancy, previous hysterectomy, diethylstilbesterol exposure, insufficient ECC, or colposcopic examination that showed an abnormality that required cervical biopsy. Postmenopausal women were also excluded because they have an increased risk of adenocarcinoma and colposcopy is frequently unsatisfactory. We also excluded women who had surgery or ablation for cervical dysplasia within the past year. Those patients have a well-established risk of recurrent dysplasia and should be observed closely.

Colposcopy was done with a Wallach ZoomScope colposcope (Wallach Surgical Devices Inc., Orange, CT) before and after the application of 3% acetic acid. All examinations were done by staff gynecologists or residents under direct supervision of an attending staff gynecologist or gynecologic oncologist. Examinations were considered satisfactory if the entire transformation zone and squamocolumnar junction were fully visualized. Papanicolaou smears were not repeated routinely at colposcopic examination. Endocervical curettage was done with a Kevorkian curette rotated circumferentially within the endocervical canal. The specimen was placed in formalin. After automated processing overnight, 4-μm paraffin sections were stained with hematoxylin-eosin. Curettage specimens were reviewed by staff pathologists. Endocervical curettings were considered sufficient for diagnosis if at least a few strips of endocervical epithelium were identified. Curettage specimens containing atypical epithelium with underlying stroma were graded using the standard terminology of mild, moderate, or severe dysplasia. Statistical analysis was done with exact binomial confidence intervals (CI).

Results

A computerized review of 2517 patient records found 860 that fulfilled the initial search criteria. A manual review of those records with the exclusion criteria isolated 159 women. Of those excluded, most had colposcopic abnormalities or were pregnant, and therefore did not have ECCs. Eighty-four of 159 had original cytology of low-grade SIL, and 75 had cytology results of recurrent ASCUS or ASCUS favor SIL. The mean age of the study group was 28.3 years. In 1998, the rates of ASCUS and low-grade SIL at our institution were 5.3% and 4.0%, respectively, and 84% of all colposcopic examinations were satisfactory. Four of 159 (2.5%, 95% CI 0.69, 6.3) women had dysplastic cells in endocervical curettings. All ECC specimens had benign endocervical cells and separate fragments of squamous epithelium with mild dysplasia.

Three women had loop electrosurgical excisions that found mild dysplasia limited to the ectocervix and transformation zone. The fourth woman was believed to have contamination from an unrecognized ectocervical lesion and was treated conservatively. On subsequent reevaluation she had only benign endocervical cells and a normal Papanicolaou smear. Using the loop electrosurgical excision procedure as our criterion, involvement of the endocervix by dyplasia was excluded in all but one of 159 subjects (0.63%, 95% CI 0.02, 3.5).

Discussion

The intent of this investigation was to estimate the incidence of endocervical dysplasia in a low-risk subgroup of colposcopy patients for whom ECC might be unnecessary. Endocervical dysplasia was conclusively excluded in all but one of our subjects, and the remaining woman likely had false-positive results because her subsequent ECC showed only benign endocervical cells and cytology results within normal limits. The low incidence of endocervical dysplasia in the present study directly contradicts the literature.[2,9] The disparity might be explained partly by inclusion and exclusion criteria used in this study. Women were excluded if any colposcopic lesions were seen, so the likelihood of inadvertent false-positive ECC from an ectocervical squamous lesion was decreased. Unlike most of the literature, the present study also excluded women with high-grade SIL who might have been at higher risk of a positive ECC.

The rate of satisfactory colposcopy (Table 1) varies in the literature from 54–95%.[2,3,6,9,10] That rate might vary with prior ablative procedures or mean age of the patients, but such a large disparity raises concern that the transformation zone is not seen completely in all patients. The transformation zone and new squamocolumnar junction define the boundary for SIL,[13] so accurate delineation is paramount. Among women with unsatisfactory colposcopies, the rate of dysplasia within the endocervical canal might be 25–50%.[9,14] A review of our electronic colposcopy diagrams found that the transformation zone was within the cervical os in three of four women with positive ECCs. That again raises concern regarding accurate identification of the entire transformation zone, making inadvertent contamination likely from an unrecognized lesion near the cervical os. In a 1993 publication, the ACOG noted that a positive ECC might not indicate dysplasia of the endocervical canal, but the inadvertent detection of an ectocervical lesion near the external os.[1] As noted earlier, histologic examination of specimens from the loop electrosurgical excision procedures excluded endocervical involvement, confirming the original ECC

results as false positives. All ectocervical squamous atypia was limited to mild dysplasia.

The value of ECC as a diagnostic tool is also unclear. In conization specimens, the ECC has had false-negative and false-positive rates up to 45% and 25%, respectively.[15] That undoubtedly leads to many unnecessary cervical conizations, yet raises concern that an endocervical lesion could go undetected. Women with atypical glandular cells of undetermined significance are at increased risk for high-grade SIL, adenocarcinoma in situ, and invasive adenocarcinoma, so they require ECC. Other limitations of ECC include significant discomfort and added expense to colposcopic examinations. In the present study, $24,009.00 was spent over 15 months and prompted three unnecessary loop electrosurgical excision procedures. No case of true endocervical disease such as adenocarcinoma in situ was found in any subject.

Women treated at our colposcopy clinic are routinely reevaluated in 4–6 months with cytology or colposcopic examinations at the discretion of attending physicians. We recommend that women who meet study criteria and in whom the ECC is omitted also have surveillance Papanicolaou smears in 4–6 months. In women with persistently abnormal cytology, ECC might be warranted.

The incidence of squamous dysplasia of the endocervical canal was extremely low (0.63%, 95% CI 0.02, 3.5) in women who had a satisfactory and normal colposcopic examination and original cervical cytology results of consecutive ASCUS, ASCUS favor SIL, or low-grade SIL. Our findings suggest that endocervical curettage might be safely avoided in such patients. Given the sample size of this study, further research will be needed to confirm our results.

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