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Colposcopic Grading of Cervical Intraepithelial Neoplasia

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A 22 year old G0 patient was referred for a colposcopy secondary to a pap-smear remarkable for low grade squamous intra-epithelial neoplasia (LGSIL). This patient is a non-smoker with a negative medical history and approximately five life time partners. Her menarche began at age 16 with frequency of menses every twenty five days for a duration of four days. She complained of intermenstrual bleeding, however denied post-coital bleeding.

The colposcopist performed the evaluation and presented the lesion as a high grade lesion. A review of the colposcopic findings revealed satisfactory colposcopy with an aceto-white lesion in two quadrants with irregular variegated margins, shiny white color without punctation, mosaicism or abnormal vessels. Using the modified Reid Colposcopic Index (RCI) which includes features of lesion borders, tone of aceto-whitening and vascular pattern, and the lesion as judged as consistent with HPV induced mild dysplasia.

Biopsies were taken at 12 and 2 o'clock and endocervical curettage (ECC) was done. Both ectocervical biopsies demonstrated koilocytic atypia, dysplastic cells within the lower third of the epithelium and focal papillae formation, representing mild squamous dysplasia with Human Papilloma Virus effect, consistent with the macroscopic findings of a condyloma acuminatum, exophytic type. (Figs. 3, 4.)The ECC showed unremarkable endocervical cells. were read as mild squamous dysplasia with Human Papilloma Virus effect. The ECC showed unremarkable endocervical cells. Patient was counseled on results and importance of follow up pap-smears. Patient will return for a repeat pap-smear in 6 months, as per ASCCP guidelines.¹

While colposcopy is critical for further evaluation of abnormal pap-smears, colposcopic findings can be misleading.^{2,3,4} The level of experience of the practitioner can play an important role in the interpretation of the colposcopy, as residents and nurse practitioners obtain more experience the accuracy of their colposcopy increases. Analysis of ALTS trial data by Gage and colleagues⁵ emphasized the importance of multiple biopsies of cervical lesions to better represent the cervical lesion, with greater than one biopsy there is an improved chance of detecting dysplasia. Due to the subjective nature of colposcopy there may be differences in interpretation of the colposcopic findings. However, the implementation of a scoring system such as the modified Reid Index (RCI) may assist the novice colposcopist in assessing the characteristics of the abnormal transformation zone.

The pathologist is not immune to variations in pathologic categorizations and during the interpretation of the pathology specimen interobserver differences have been documented.^{6,7} The goal that we all have in common is the detection of abnormal cervical lesions and the secondary prevention of cervical cancer.

Pap smear screening with triaged colposcopic evaluation has been essential in the detection of dysplasia and ultimately secondary prevention of cervical cancer. This case illustrates the importance of biopsying all aceto-white lesions to maximize sensitivity of colposcopic diagnosis. Furthermore the clinician must utilize all the components of the evaluation system--the pathologist, the cytologist, and the colposcopist in determining the correct care for the individual patient.

Fig. 1 and 2 courtesy of Jane DeNight ARNP



Figure 1. Satisfactory colposcopy with an aceto-white lesion in two quadrants with irregular variegated margins, shiny white color without punctation, mosaicism or abnormal vessels (15x with acetic acid)



Figure 2. (magnified view)

Fig. 3 and 4 courtesy of Monica T. Garcia MD

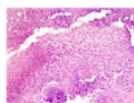


Figure 3. Cervical squamous epithelium showing dyskeratosis, koilocytotic changes and mild squamous dysplasia (H&E, 200x)

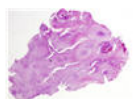


Figure 4. Tangentially cut cervical squamous mucosa with HPV cytopathic changes and focal papillae formation. (H&E, 40x)

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After completing his undergraduate work in Chemistry at Wright State University, Dr. Norris went on to medical school at the Medical College of Ohio. He completed his Obstetrics & Gynecology Residency at Jackson Memorial Medical Center.

Dr. Norris is an 8-time recipient of the Outstanding Teaching Award, has had a role in numerous funded research studies, and has co-authored several peer-reviewed journal articles.

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Dr Leo B. Twiggs is Chairman of the Department of Obstetrics and Gynecology and Professor of Clinical Obstetrics and Gynecology at the University of Miami Leonard M. Miller School of Medicine. He also serves as the Clinical Service Chief at Jackson Memorial Hospital.

Dr. Twiggs is nationally considered a powerful advocate for women's health issues whose works have benefited women across South Florida and beyond. He is also a highly skilled clinician in the field of gynecologic oncology, with a particular research emphasis on cervical cancer. He believes in a multidisciplinary approach to women's health that emphasizes improvements in clinical care with acquisition of new knowledge. A board-certified gynecologic oncologist, Dr. Twiggs' interests in

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organizational change and the subsequent impact on the quality of healthcare is in tandem with his dedication to the clinical care of cancer patients. He has authored more than 150 peer-reviewed articles on the clinical care of cervical carcinoma and the use of vaccination for prevention of cervical cancer.

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