Colposcopy of the Vagina and Vulva

Hélène M. Gagné, MD, FRCS(C)

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The vagina and vulva are less common sites than the cervix for development of cancer and cancer precursors. Vaginal intraepithelial neoplasia (VaIN) and vulvar intraepithelial neoplasia (VIN) are increasingly diagnosed, are often HPV related, and are known cancer precursors, however. Colposcopy of the vagina and vulva is an important component of the screening process for lower genital tract diseases.

COLPOSCOPY OF THE VAGINA AND DIAGNOSIS OF VAGINAL INTRAEPITHELIAL NEOPLASIA

Vaginal Colposcopic Indications

Limited vaginal colposcopy should be undertaken routinely with each cervical colposcopic examination with an evaluation of the proximal one third of the vagina after examining the cervix and during the withdrawal of the speculum. More detailed vaginal colposcopy is warranted in women with abnormal cervical cytologic results that are unexplained by cervical findings or incongruent with cervical colposcopic findings. Other indications include abnormal cytologic results in a woman with a previous hysterectomy or treatment of cervical dysplasia, palpable or visible vaginal lesions, unexplained postcoital or vaginal bleeding, coexisting human papillomavirus (HPV) disease in an immunosuppressed patient, and diethylstilbestrol exposure in utero.[1,2]

Vaginal Colposcopic Technique

Vaginal colposcopy can be challenging because of the anatomy and features of the vagina. The anterior and posterior walls of the vagina are usually obstructed by the speculum blades, and the anterior and posterior fornices can be difficult to access because of the position of the cervix. There is a large surface area involved. In women with a prior hysterectomy, the lateral aspects of the vaginal vault can be difficult to examine. The use of skin hooks, an angled mirror, or an endocervical speculum can improve access to these areas. The vaginal rugae can make examination of the vaginal

Department of Obstetrics and Gynaecology, The University of Ottawa, 152 Cleopatra Drive, Suite 110, Ottawa, ON K2G 5X2, Canada
E-mail address: hgagne@ottawahospital.on.ca

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walls challenging because the folds can obstruct the visualization of small lesions. The presence of abundant vaginal discharge can obscure the evaluation of the vaginal epithelium.

A systematic approach to the evaluation of the vagina includes vaginal cultures if indicated, cleaning off discharge with a saline-soaked, large, cotton-tipped applicator, application of 3% to 5% acetic acid to the fornices and lateral walls of the vagina, and careful inspection of these areas, which can be assisted by the use of cotton-tipped applicators to manipulate the cervix. Rotation of the speculum 90° (with collapsed blades) permits application of acetic acid and inspection of the anterior and posterior vaginal walls. Opening and closing the vaginal blades can help to smooth out the vaginal rugae for improved exposure. Application of Lugol's iodine also can be helpful in identifying any abnormal areas. Notes should be made of any areas with abnormal texture, lesions, cysts, acetowhitening, and Lugol's negative areas on a vaginal diagram. Punctation vascular changes are commonly seen in the vagina in the presence of dysplasia, atrophy, or inflammation, and mosaic vascular changes are uncommon in the vagina. The enhanced punctation is diffuse in the benign processes and localized in the presence of dysplasia. Should the vaginal visualization be significantly impaired because of atrophy, a short course of vaginal estrogen using 1 g of estrogen daily for 3 weeks can be used before repeat colposcopy.[2] Other benign causes of changes in the vaginal appearance include vaginal intercourse and use of tampons, diaphragms, vaginal spermicides, vaginal pessaries, and vaginal ring hormonal delivery systems.[3]

Vaginal Biopsy Technique

Colposcopically directed vaginal biopsies are indicated to evaluate any abnormal vaginal findings. Vaginal dysplastic changes are often less specific in appearance compared with cervical dysplasia and warrant histologic evaluation. The upper two thirds of the vagina have little sensation and often can be biopsied without anesthesia. The distal third usually requires injection of local anesthesia before biopsy. Pinching a neighboring normal area with a fine-tipped forceps can serve as a test to determine whether anesthesia is needed. It is essential that the biopsy forceps be sharp, and reducing the tension of the speculum blades sometimes can aid in obtaining the biopsy specimen by making the vaginal side wall bulge into view, which allows the perpendicular application of the biopsy forceps. Vaginal biopsies usually bleed little, and hemostasis is usually easily achieved with Monsel's solution or a silver nitrate stick. Biopsies should be labeled carefully to identify the distance from the cervix or introitus and the position on the clock face. If multiple biopsies are taken, they should be sent for pathologic evaluation in separate containers.

Vaginal Intraepthelial Neoplasia

VaIN occurs infrequently compared with cervical intraepithelial neoplasia (CIN), but its incidence is increasing,[4] likely because of increased awareness, increased frequency of cytologic and colposcopic screening, and an absolute increase in frequency. Most VaIN are HPV induced and can occur in conjunction with other HPV manifestations in the lower genital tract. In keeping with the nomenclature of CIN, VaIN is divided into three grades. VaIN 1 is diagnosed when atypia is present in the lower third of the epithelium; VaIN 2 has atypia present in the lower two thirds of the epithelium; VaIN 3 occupies more than two thirds of the epithelial thickness. VaIN 2/3 is often reported as high-grade VaIN consistent with the Bethesda system for reporting CIN. VaIN can be identified on cervical or vaginal vault cytology in women with a previous