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Colposcopy is the visual interrogation of the female lower genital tract via binocular magnification. Using high intensity light and an upright microscope the cervix, vagina, and vulva are examined with and without the application of topical preparations, which can enhance the visual signatures of disease states. Colposcopy with biopsy may miss as many as 40% of CIN 2 lesions present, therefore follow up of all patients is critical.

Lead Editors

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Indications

1. Evaluation of abnormal cervical cytology
2. Evaluation of Pre-invasive disease of the lower genital tract (CIN, VIN, VAIN).
3. Evaluation of victims of sexual abuse.
4. Removal of foreign body.
5. Provide visualization during LEEP procedures
6. Help identify "lost" IUD strings.

Contraindications

1. Active genital infection

Procedure

1. Fully counsel patient regarding indications, risks, and potential benefits of the procedure. Document this discussion.
2. Position patient in the lithotomy position
3. Inspect the vulva and introitus without magnification.
4. Insert speculum in usual fashion. A small amount of water-based lubricant may be used.
5. Cleanse vagina of any secretion and inspect vagina and cervix. Liberally apply a 3-5% solution of acetic acid for 1-5 minutes. The longer the application time the greater the visual changes. (Cornified epithelium requires at least 5 minutes application time.) Acetic acid not only cleanses the surface, but also causes condensation of cellular cytoplasm rendering immature cells more photo-reflective- thus the aceto-white reaction.
6. Visually inspect cervix and vagina looking for visual indicators of disease states. These include aceto-white epithelial changes indicating hypertrophy often associated with metaplasia or dysplasia. Punctation and mosaicism often indicate CIN (usually I or II) while abnormal vessel patterns (corkscrews, commas, etc) are associated with CIN III or micro-invasive disease of the cervix. (Use of the green filter will allow better identification of abnormal vascular patterns.) Diffuse erythema and hypervascularity are seen with inflammatory and infectious conditions.
7. When evaluating abnormal cytology, or following CIN, it is imperative to see the entire transformation zone (TZ). This is the area of the cervix between the squamo-columnar junction (near the os) and the more external mature squamous epithelium. It is helpful to use an endocervical speculum when the os is narrow, the SCJ is in the canal, or a lesion extends into the canal. Complete visualization of the TZ and any lesion is required to consider the exam adequate.
8. Repeat cytology may be performed.
9. Biopsy of any areas suspicious for CIN should be considered in the non-pregnant patient. (In pregnancy biopsy is reserved for those lesions thought to be invasive or micro-invasive). Application of topical anesthetics may reduce the discomfort of a biopsy. More important for patient comfort, however, is keeping all biopsy forceps sharpened. Dull instruments will cause more pain because of the increase force required to obtain the specimen. Biopsy of the most suspicious areas must take priority with posterior lesions being biopsied before those on the anterior lip.
10. Endocervical curettage (ECC) can be performed after biopsy. ECC should be done when a lesion extends into the canal or if the SCJ is not entirely seen. ECC is also indicated with cytology interpreted as Atypical Glandular Cells (AGC/AGUS). ECC is obtained by inserting an endocervical curette into the canal, curetting while rotating the instrument, and then directly inserting the curette into the fixative solution. Additional specimen is obtained by inserting a cervical brush into the canal, rotating the brush, and placing the entire head of the brush into the fixative. Use of a brush has been shown to reduce the number of inadequate ECC specimens.
11. Apply a hemostatic agent to biopsy sites. Silver nitrate or Monsel's solution (ferric subsulfate) are most commonly used.
12. Document findings with detailed description of adequacy of exam, type and location of abnormalities, location of biopsies, and colposcopic impression. Photo-documentation or diagrammatic representation of findings is strongly recommended.

Follow-up

A process to ensure proper follow-up for any patient evaluated for abnormal cervical cytology is critical. When biopsies are taken a system to review those results, and communicate the results to the patient, must be established. Failure to notify patients of invasive, micro-invasive, and pre-invasive conditions has been the cause for many medical liability actions.

Post-procedure care

Minimal vaginal bleeding may continue for 3-7 days and vaginal discharge is common. Pain should last no longer than 24 hours and usually subsides in less than 1 hour. Acetaminophen or over the counter NSAIDs should be adequate for pain control. Patients should defer sexual activity, use of tampons, and use of vaginal preparations or douching until all bleeding has stopped. Patients should be instructed to call for fever, worsening pain, heavy vaginal bleeding, or malodorous vaginal discharge.

References

- American College of Obstetrics and Gynecology, Management of Abnormal Cervical Cytology and Histology, Clinical Management Guidelines. Number 66 September 2005
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