



Case Study



Case Report: Adenocarcinoma of the Cervix

Randall K. Gibb, MD

History: 32-year-old gravida 2 para 2 presents for evaluation of an AGC (atypical glandular cells, formerly called AGUS prior to Bethesda 2001) Pap smear. Also notes new onset of “heavier than normal” periods over the last six months. She denies any change in weight, abdominal or pelvic pain, change in gastrointestinal or genitourinary function, or sense of urinary urgency or frequency. She denies postcoital spotting.

Past History:

- Medical: None.
- Surgical: None.
- Medications: Oral contraceptive pill.
- Allergies: None known or diagnosed.
- Gynecologic: Prior history of genital warts in her early twenties, prior five Pap smears have all been normal until now. History of an ASCUS (atypical squamous cells of undetermined significance) Pap smear in her twenties as well. Currently using oral contraceptives for birth control.
- Obstetric: Two normal spontaneous vaginal deliveries, which were uncomplicated.
- Family history: None.
- Social history: No smoking, ethanol abuse, or illicit drug use.

Physical Exam:

General exam not remarkable.

Colposcopy:

After application of 3% acetic acid the entire transformation zone was seen and the colposcopy was felt to be adequate. Moderate aceto-white staining of the ectocervix at 6 o'clock noted with some mild punctuation. Biopsy of this area obtained. Endocervical curettage obtained without difficulty. Endometrial biopsy obtained as well due to metrorrhagia. Uterus sounded to 7 cm and scant tissue obtained.

Results:

- Pap smear: Atypical endocervical cells, favor neoplasia.
- Cervical biopsy: Severe cervical dysplasia.
- Endocervical curettage: Highly abnormal endocervical cells, at least adeno-carcinoma *in-situ*, possibly a more worse lesion exists.
- Endometrial biopsy: Proliferative endometrium, negative for hyperplasia or malignancy.

Editors:

Thomas F. Purdon, MD, FACOG

Clinical Professor of Obstetrics and Gynecology
Department of Obstetrics and Gynecology
University of Arizona Health Sciences Center, Tucson, Arizona
Consultant, United Community Health Centers of Arizona

Kenneth D. Hatch, MD

Professor, Obstetrics and Gynecology
University of Arizona College of Medicine
Tucson, Arizona

Randall K. Gibb, MD, FACOG

Dr. Randall K. Gibb is currently Director of Gynecologic Oncology Cancer Services at Billings Clinic in Billings, Montana.

Dr. Gibb was born in Miami, Florida, and earned his bachelor's degree from the University of Illinois at Urbana-Champaign and received his medical degree from Loyola University Chicago Stritch School of Medicine. He completed his residency in obstetrics and gynecology at St. Louis University in St. Louis, Missouri, and his gynecologic oncology fellowship at the University of Louisville School of Medicine in Louisville, Kentucky.

Case Study

Plan:

Counseled patient on need for conization of the cervix given suspicion for endocervical abnormality and Pap smear that favors neoplasia.

Findings:

Conization results: Invasive moderately differentiated adenocarcinoma of the endocervix. Depth of invasion is 8 mm. Endocervical margin is positive for cancer. Positive lymph-vascular space involvement. Also present is severe squamous cell dysplasia on the ectocervix with negative ectocervical margins. Patient given diagnosis of stage IB1 adenocarcinoma of the cervix.

Plan:

Counseled patient on need for a radical abdominal hysterectomy with bilateral pelvic and paraortic lymph node dissection. Workup with CT scan of abdomen and pelvis is negative for obvious lymph node involvement, metastatic disease, and no obvious hydroureter.

Findings:

Radical hysterectomy specimen demonstrated residual invasive moderately differentiated adenocarcinoma, endometrioid type. Total dimensions of residual tumor measured 1 cm. Total negative lymph nodes was 31. All surgical margins are free of disease. Postoperative course uneventful. No further treatment recommended other than close follow-up.

Discussion:

The incidence of cervical AIS and adenocarcinoma has been steadily increasing over the past 20 years and has doubled relative to the incidence of squamous cell carcinoma. Although typically seen in older women, adenocarcinoma is increasing in frequency in younger women, producing a bimodal age range. Adenocarcinoma is associated with HPV infection. Liquid-based cytology, specifically ThinPrep®, increases the sensitivity of Pap testing for glandular abnormalities.¹ For AGC Pap results, HPV testing for the detection of any high-grade lesion has 95% sensitivity and about 50% specificity.²

AGC is a relatively uncommon cytologic diagnosis, occurring in approximately 0.18 to 0.74% of cervical smears. It is not equivalent to ASCUS and carries a much higher likelihood of cervical dysplasia. Of women with AGC smears, 50 to 80% will have no histologic abnormality on further evaluation. However, 20 to 50% are found to have significant histologic abnormalities, such as cervical intraepithelial neoplasia, adenocarcinoma in situ (AIS), or adenocarcinoma.³

Colposcopic examination is recommended for all women with a cytologic diagnosis of AGC. When a diagnosis of "favoring neoplasia" is rendered on Pap smear, excisional biopsy is needed. Those women with AGC who are suspicious for adenocarcinoma should undergo cervical conization, even in the absence of detectable abnormalities on colposcopic examination. Like women with squamous cell carcinoma, women with early invasive adenocarcinoma of the cervix should undergo surgical treatment. Adenocarcinoma is treated the same as squamous cell cancer, including the same follow-up and radiologic studies. Stage for stage, survival is equivalent between the two forms of cancer.

¹ *Cancer (Cancer Cytopathol)*. 2002;96:338-43. ©2002 American Cancer Society.

² Castellsague X, Diaz M, de Sanjose S, et al. Worldwide human papillomavirus etiology of cervical adenocarcinoma and its cofactors: implications for screening and prevention. *J Natl Cancer Inst*. 2006;98(5):303-315.

³ DeSimone CP, Day ME, Tovar MM, et al. Rate of pathology from atypical glandular cell Pap tests classified by the Bethesda 2001 nomenclature. *Obstet Gynecol*. 2006;107(6):1285-1291.

He is licensed in Kentucky, Missouri, and Montana.

Dr. Gibb has contributed to many published articles, most recently in *Gynecologic Oncology*, the *International Journal of Radiation Oncology, Biology, Physics*, and *Radiation Medicine*. He has also written numerous abstracts and book chapters.