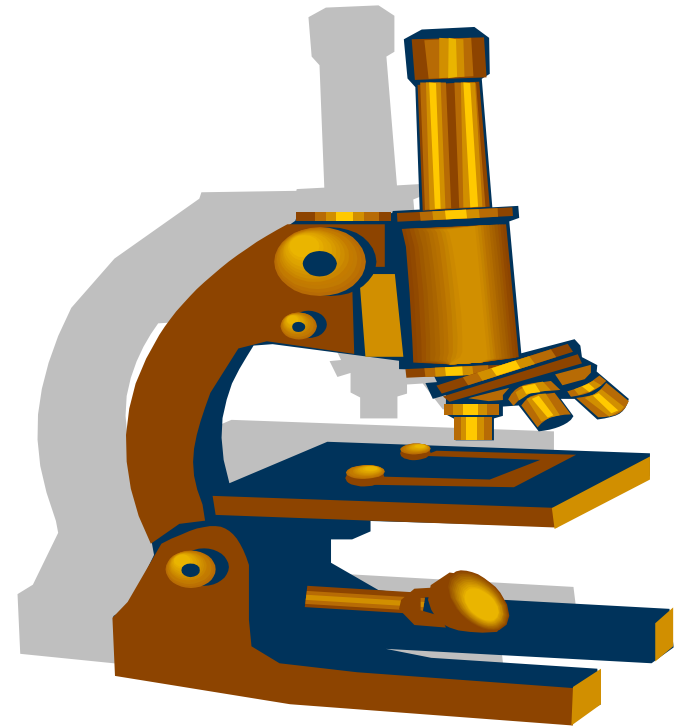


Hidden Epidemic: Anal Cancer Screening & Concern



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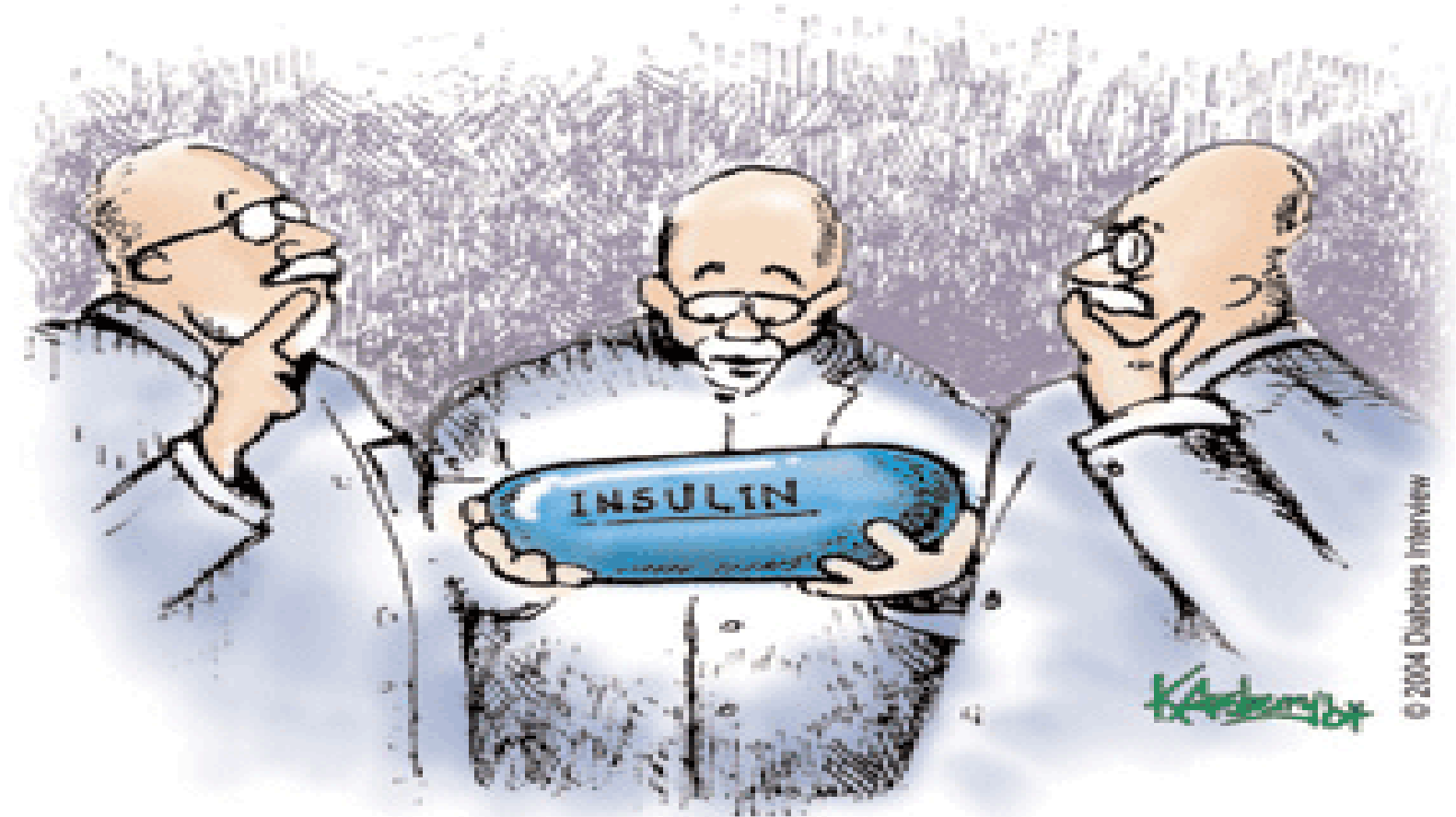
American Society of Addictive Medicine

American College of Forensic Examiners Institute

Janes Street Clinic, Saginaw, MI

We resist anal exams & medicine

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Despite the valiant efforts of the research group, the insulin suppository still had one major drawback.

**The Incidence of Anal
Squamous Cell
Carcinoma in Gay and
Bisexual Men Exceeds
that in Heterosexual
Men and is Higher
than Cervical Cancer
in Women**

Who is this ??



etna Farrah Fawcett
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etna Farrah Fawcett at Warner Bros. Party Celebrating "The Untouchables"
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Anal Cancer in the public.



- Anal Cancer can happen to anyone.
- Anal Cancer can happen any time.
- Anal Cancer can be screened.
- Anal Cancer can be found & fixed if **early enough.**

Anal Squamous Cell Carcinoma

- Men 7 in 1,000,000
- Women 9 in 1,000,000
- Gay Men HIV - 350 in 1,000,000
- Gay Men HIV + 700 in 1,000,000

- Anal cancer is **on the rise in both sexes**, particularly among **American men**, and changing trends in **sexual behavior** -- combined with current **tobacco use** and infection by a specific **strain of the human papillomavirus** -- may help explain the increase.
- These findings, from two separate studies by researchers at Fred Hutchinson Cancer Research Center, will be reported in a pair of papers in the July 15 issue of “**Cancer**”. The lead author is Lisa G. Johnson, Ph.D.

Human Papilloma Virus {HPV}

- Genital warts
- Condyloma
- Associated with Anal and Cervical Cancer
- 70% of these cancers have detectable HPV DNA
- Over 100 genotypes of HPV
 - HIGH RISK progression to Cancer
 - 16, 18, 31, 33, 35, 39, 45, 51,52

HPV

- Lesions commonly on mucosa and poorly keratinized skin
 - Oral, Penile, Vaginal, Cervical and Anogenital
- Asymptomatic
- Uncommonly Ulcerated or Painful
- Lesions may be:
 - CONFLUENT or plaque like
 - Nodular, flat topped papules
 - Verrucous (cauliflower floret like)

Treatment of external anal warts

- Aldara 71%
- Liquid Nitrogen 54%
- Electrodesiccation 34%
- Condylox 20%
- Others 39%
 - BCCA
 - TCA
 - Cantharin

Treatment of internal anal warts

- Aldara 32%
- Liquid Nitrogen 15%
- Electrodesiccation 27%
- Condylox 10%
- Others 76%
 - BCCA
 - TCA
 - Cantharin
 - OR or colorectal referral for excision

Epithelial Abnormalities

- Normal – no evidence of a problem
- ASCUS - atypical
- SIL
 - LSIL - low grade precancer
 - HSIL – high grade precancer
- SCCIS
- Invasive squamous cell carcinoma (SCC)

- NORMAL small nucleus big cytoplasm
- INFLAMMATORY
- PRECANCER multinucleated
- CANCER

- The transitional zone is the area the cancer appears
- Weak thin tissue
- Easily abraded

Cervical HSIL and Anal HSIL

- Squamo-columnar transitional zone
- HPV infection testing (+) for DNA
- Trauma (micro trauma abrasion)
- Histological Similarities - you cannot tell the difference under the microscope

Cervical cancer is a reasonable model
of anal cancer development

Goal directed therapy

Reduced cervical cancer in women by 75% after the introduction of the pap smear.

Natural History of Genital **HPV** Lesions

- Requires viral entry through the surface
- Morphologically may not be expressed for 15 years (it is latent)
- Low grade lesions may regress
- High grade lesions may progress to CA

Natural Immune Response to HPV

- Cellular response (not humoral)
 - T cells
 - IL-2
 - IFN
- HPV elusive because HPV cells have little antigen presenting capability
- HPV has low levels of genetic material
- No inflammation, no erythema, no swelling, no itching

HPV infections: Lesions

- Resolve spontaneously
- Stable?? persist or remain stable
- Increase in extent
- Progress from LSIL to HSIL to SCCIS
- May progress to invasive SCC

High prevalence of anal squamous intraepithelial lesions and squamous cell carcinoma in men who have sex with men as seen in a surgical practice

- 131 HIV+ and 69 HIV- msm referred to surgical center evaluated by anal PAP, high resolution anoscopy and biopsy
- 54 % HSIL
- 93 % abnormal cytology
- 3 % invasive SCC (4 of 5 were HIV+)
- **Dis Colon Rectum 2001; 44, 690-698**

HIV (+) patients with anal squamous cell carcinoma have poorer treatment tolerance and outcome than HIV (-) patients seen in a surgical practice (1995-1998).

• X

	Men	Gay	TrxTox	postTrx
HIV(+)	92%	46%	80%	62%
HIV(-)	42%	15%	30%	85%

• **Dis Colon Rectum 2001; 44: 1496-1503**

Incidence of SCC

- Women before PAP 32/100,000/year
- Women today 8/100,000/year
- HIV – gay men 32/100,000/year
- HIV + gay men 72/100,000/year

Cancer prevention model

- Screening cytology
 - PAP smears
- Directed therapy for High Grade Lesions
 - COLPOSCOPY
 - BIOPSY and DESTRUCTION
- 78% reduction in incidence of CERVICAL Squamous Cell Carcinoma

Cancer prevention model

- Screening cytology
 - Anal PAP smears
- Directed therapy for High Grade Lesions
 - high resolution COLPOSCOPY
 - BIOPSY and DESTRUCTION
- ???% reduction in incidence of ANAL Squamous Cell Carcimona

Recommended guidelines

- Women who have anal sex
- Men who have sex with men
- **SCREENED ANNUALLY**
- High grade lesions pap every 6 months or referral to colorectal surgeon

investigator	Treatment	Patients	5yr survival
Frost	APR	109	62%
Bowman	APR	118	71%
Pintor	APR	118	62%
Stearns	XRT	8	50%
Papillion	XRT	159	65%
Salmon	XRT	183	59%
Meeker	Chemorad	19	88%
Sischy	Chemorad	79	73%
Nigro	Chemorad	104	76%

Today's Whole Message

- **Caught early this may be a very fixable condition.**
- **Not knowing is not the answer.**
- **No buts about it.**

- **Abstract No:**
- **4080**
- **Citation:**
- *Journal of Clinical Oncology*, 2004 ASCO Annual Meeting Proceedings (Post-Meeting Edition). Vol 22, No 14S (July 15 Supplement), 2004: 4080
- **Author(s):**
- E. Y. Chiao, D. Schrag; Memorial Sloan Kettering Cancer Center, New York, NY
- **Abstract:**
- **Background:** Like cervical cancer, squamous cell carcinoma of the anal canal (SCCA) is etiologically linked to Human Papilloma Virus (HPV). HIV-related immunosuppression likely contributes to the increased incidence of SCCA. We sought to describe secular trends in SCCA in relation to the HIV epidemic. **Methods:** We used data from the Surveillance, Epidemiology and End Results (SEER) database to calculate trends in age-adjusted incidence of SCCA from 1973-2000. We analyzed the data according to three separate periods during the HIV epidemic: Pre-HIV (cases reported from 1973-1984), Pre-Highly Active Antiretroviral Therapy (HAART) (cases reported from 1985-1995), and Post-HAART (cases reported from 1996-2000). **Results:** A total of 6,061 cases of SCCA were reported from 1973-2000. The incidence per 100,000 of SCCA increased from 0.8 (0.8,0.9) pre-HIV to 1.1 (1.0,1.1) pre-HAART to 1.4 (1.3,1.5) with HAART. The gap between SCCA incidence in women compared to men decreased from 1.7:1 Pre-HIV to 1.1:1 in the HAART era. The gap between SCCA incidence in cases > age 60 compared to ages 20-59 has also decreased from 4:1 Pre-HIV to 3:1 in the HAART era. Percentage of cases diagnosed early (In situ or Localized disease) increased from 44% pre-HIV to 50% pre-HAART and to 60% with HAART. Percentage of advanced disease (Regional Lymph Node involvement, and Distant metastases) decreased from 47% pre-HIV to 35% pre-HAART and to 30% with HAART. Five-year relative survival increased from 63% pre-HIV to 64% pre-HAART to 68% with HAART. **Conclusions:** Despite the advent of HAART therapy for HIV, the incidence of SCCA continues to increase. The incidence of SCCA has particularly increased in men and in cases age 20-59 which suggests an association with the HIV epidemic.

- Anal dysplasia in HIV-infected women with cervical and vulvar dysplasia.
- Citation:
- J Low Genit Tract Dis, United States; Vol 8, No 4 (5/6/2005): pp. 272-5
- Affiliation:
- Gynecology Service, Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, NY, USA.
- Authors:
- Elizabeth A Stier, Susan E Krown, Dennis S Chi, Carol L Brown, Elizabeth Y Chiao, Oscar Lin
-
- **OBJECTIVE:** To describe the findings of high-resolution anoscopy (HRA) in human immunodeficiency virus (HIV)-infected women with a history of lower genital tract dysplasia. **MATERIALS AND METHODS:** A retrospective chart review of all HIV-infected women undergoing HRA from 2002 to 2003 was conducted. Demographic and clinical information, including the most recent cervical and vaginal cytologic results and colposcopic evaluations, were collected from medical records. These data were compared with anal cytologic and histologic findings from HRA. **RESULTS:** Eight patients were identified, with a mean age of 42 years. The mean duration of known HIV infection was 12 years. All eight patients had a previous history of treatment for cervical dysplasia or carcinoma. Five patients also had a history of high-grade vulvar dysplasia. The most recent cervical and vaginal cytologic results for all patients were abnormal. Seven patients underwent HRA because of suspected anal intraepithelial neoplasia (AIN); of these, four patients had perianal warts and three had diffuse high-grade vulvar dysplasia. One patient was referred for HRA because of high-grade dysplasia on vaginal cytologic analysis with a negative colposcopic and urologic evaluation. All eight patients (100%) had abnormal anal cytologic results with histologically proven AIN. Five patients had AIN 2,3, and three patients had AIN 1 and anal condyloma. Two of the three patients with AIN 1 had high-grade perianal dysplasia. **CONCLUSIONS:** High-resolution anoscopy identified anal dysplasia in 100% of eight HIV-infected women with human papilloma virus-related dysplasia of the lower genital tract. High-resolution anoscopy should be considered as part of the evaluation for the extent of disease in HIV-infected women with cervical and vaginal dysplasia, condyloma, and dysplasia of the perineum.

- **A population-based analysis of temporal trends in the incidence of squamous anal canal cancer in relation to the HIV epidemic.**
- **Citation:**
- **J Acquir Immune Defic Syndr, United States; Vol 40, No 4 (11/11/2005): pp. 451-5**
- **Affiliation:**
- **Department of Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY, USA. echiao@bcm.tmc.edu**
- **Authors:**
- **Chiao, Krown, Stier, Schrag**
- **Squamous cell carcinoma of the anal canal (SCCA) is etiologically linked to human papillomavirus, and its incidence is increased among the immunosuppressed. We used data from the Surveillance, Epidemiology, and End Results program to analyze the incidence of SCCA in relation to 3 separate periods during the HIV epidemic: the pre-HIV era (1973-1981), the HIV era (1982-1995), and the highly active antiretroviral treatment (HAART) era (1996-2001). The incidence per 100,000 population of SCCA increased from 0.6 in the pre-HIV era to 0.8 in the HIV era and to 1.0 in the HAART era. The gap in SCCA incidence between women and men decreased from a ratio of 1.6:1 in the pre-HIV era to 1.5:1 in the HIV era and to 1.2:1 in the HAART era. There was a significant increase in incidence rates among men and women aged 30 to 54 years in the HAART era compared with the HIV era. Men were more likely to be diagnosed with early-stage disease, but they were less likely than women to receive radiation therapy. The incidence of SCCA has particularly increased among men and those between 30 and 54 years of age since the introduction of HAART.**