Cervical Abnormalities in HIV-Infected South African Women with High Screening and Referral Rates

POSTER 717

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INTRODUCTION

- Invasive cervical cancer is the second most common cancer in South Africa and the leading cause of cancer death for women.
- More than half of all diagnosed patients will die annually from the disease, due to late presentation and lack of access to treatment.
- Women living with HIV have up to a 22-fold increase in rates of cervical cancer compared with HIV-negative women.
- Although South African guidelines recommend annual Pap smears for HIV-infected women, recent data suggest that fewer than 20% of all women are getting screened regularly. This contrasts to the U.S., where >85% of women have Pap smears.
- This study aimed to determine the prevalence of screening among HIV-infected women in care in South Africa, and rates of histological diagnoses from colposcopy and large loop excision of the transformation zone (LLETZ).

METHODS

STUDY DESIGN

- A retrospective cohort study to determine the prevalence of cervical dysplasia and malignancy among HIV-infected women in over a five-year period (2004-2009).

SETTING

- Sinikithemba HIV clinic at McCord Hospital in Durban, South Africa
- The clinic's cervical screening policy is based on international guidelines which recommend a Pap smear within 3 months of initiating antiretroviral therapy (ART), a second smear within the first year, and annual smears thereafter.

PARTICIPANTS

- Eligibility Criteria: HIV-infected women, ≥18 years, initiated on ART, and in the program for >3 months.
- Exclusion Criteria: Women having a hysterectomy prior to enrollment.
- Of 2891 eligible women, 462 were randomly sampled for inclusion, stratified by year of ART enrolment at the clinic (n=77 per annum).

DATA COLLECTION AND ANALYSIS

- Data were abstracted from electronic records and paper charts, including date of birth, CD4+ count, VL, and results from initial Pap smear, colposcopy, and LLETZ. We also tracked time to colposcopy among women with abnormal Pap smears.

RESULTS

- We reviewed a random sample of 462 charts from women in care between 2004-2009 (out of a possible 2891 eligible women).

Table 1: Baseline Characteristics

Characteristics	Median Value	IQR
Age	33.7	29.0-39.2
Baseline CD4	118 cells/mm3	55-177
Baseline Viral Load	49 copies/mL	24-61

- A total of 432 women (93.5%) had at least one Pap smear upon ART initiation, of whom 237 (54.9%) had an abnormal Pap smear (see **Table 2**).
- Of 237 with abnormal Pap Smears, 62 had atypical squamous cells of undetermined significance (ASCUS) and were followed with sequential Paps.
- Of the 175 women with low-grade squamous intraepithelial lesion (LSIL) or high-grade squamous intra-epithelial lesion (HSIL), 103 (58.9%) were referred for colposcopy.
- Of the 103 women referred for colposcopy, 89 (86.4%) had documentation of completed colposcopy within a median of 39 days (IQR 20-119 days).
- Referrals yielded 57/89 (64.0%) evaluable samples of which 21.1%, 28.1%, 26.3%, and 1.8% had cervical intraepithelial neoplasia (CIN I, CIN 2, CIN 3, and invasive cervical cancer), respectively.

Table 2: Pap Smear Results, Referral, and Colposcopy Results

	Initial Pap Smear Result	Referred for Colpo/LLETZ	Received Colpo/LLETZ	Evaluable Coplo/LLETZ
Normal	195/432 (45.1%)	n/a	n/a	n/a
Abnormal	237/432 (54.9%)	103/237 (43.5%)	89/103 (86.4%)	57/89 (64.0%)
ASCUS	62/237 (26.1%)	n/a	n/a	n/a
LSIL	125/237 (52.7%)	58/125 (46.4%)	47/58 (81.0%)	35/47 (74.5%)
HSIL	50/237 (21.1%)	45/50 (90.0%)	42/45 (93.3%)	22/42 (52.4%)

CONCLUSION

- Among a cohort of HIV-infected women accessing care at an urban clinic in Durban, South Africa where Pap smear coverage and rates of referral for colposcopy/LLETZ were very high, we observed a prevalence of >75% CIN among those referred.
- The incidence of malignancy was over 200-fold higher than the crude incidence of cervical cancer in the U.S. (7 per 100,000).
- These findings highlight the importance of cervical screening upon entry into care, and suggest that all HIV-infected women with cytological abnormalities on Pap smear should undergo early evaluation with colposcopy to optimize chances for survival.

RECOMMENDATIONS

- National guidelines should be revised to reflect the higher risk for cervical cancer acquisition among HIV infected women.
- Improved infrastructure and screening services in South Africa, through an integrated approach to care, will enable clinicians to provide timely diagnoses and referrals for cervical abnormalities.
- Future research should focus on understanding barriers to care and why women are presenting late in their disease course for care.

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