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Radical hysterectomy for operable early cervical cancer in HIV-positive and HIV-negative women in western Kenya

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HIV-infected women are eight times more likely to have invasive, rapidly progressing cervical cancer compared to women who are HIV-uninfected.[1] Early stage cervical cancer can be successfully treated by radical hysterectomy.[2] There is a paucity of research on the complications of cervical cancer treatments in HIV-infected women.[3,4] The present study highlights the complications of radical hysterectomy in HIV-infected and HIV-uninfected women in western Kenya.

The study included 53 women who were diagnosed with operable early-stage cervical cancer, gave informed consent, and agreed to undergo radical hysterectomy and pelvic lymphadenectomy at the Academic Model Providing Access to Healthcare (AMPATH) Gynecologic-Oncology unit in Eldoret, Kenya. Of these women, 33 (62%) were HIV-uninfected, while 20 (38%) were HIV-infected. There was no statistically significant difference in age, education level, occupation, or religion between the two groups (Table 1).

Of the women, 29 (55%) had cervical cancer clinical stage 1B1/1B2; seven (13%) had cervical cancer clinical stage 2A; one (2%) had stage 2B. Forty-seven (88%) of the women had squamous cell carcinoma. The other histological types were adenocarcinoma (n=4), adenosquamous (n=1) and clear cell carcinoma (n=1). There was no statistically significant difference in clinical variables (clinical stage, cervical length, cervical width, maximum tumor diameter, vaginal involvement, parametrial involvement, histology, and grade) between the HIV-infected and HIV-uninfected women.

Upon completion of procedures, a majority of the women did not have any perioperative complications (n=47, 89%), had no evidence of disease with clear surgical margins (n=47, 89%), and were well healed (n=47, 89%) within 2 weeks. There was no statistical difference when complication type and rate were subdivided and compared by HIV status. Two women (4%) had inadvertent cystotomy during surgery and repaired successfully, while another two experienced vascular injury. In each case, one was HIV-infected while the other was not. Two HIV-uninfected women had ureteric injury that was also repaired intraoperatively. Urinary complications did not occur in women (n=47, 89%), despite retention of a urinary indwelling Foley catheter for a minimum of 5 days. Ten women (20%) had some form of postoperative fever but no infection.

Disease status, current Eastern Cooperative Oncology Group (ECOG) state, wound healing, fever, and urinary tract complication were all analyzed by HIV status, and none of these variables had any statistically significant difference.

Radical hysterectomy is well tolerated with no increase in complications in HIV-infected women. It is an appropriate treatment for early-stage cervical cancer in HIV-infected women.

TABLE 1 Population summary statistics.

		Groups	
	Total N=53	HIV Neg N=33	HIV Pos N=20
Variable	n (%) or Mean (SD)		
Age, n (%)			
20-30	1 (1.9%)	1 (3.0%)	0 (0%)
30-40	19 (35.9%)	10 (30.3%)	9 (45%)
40-50	19 (35.9%)	11 (33.3%)	8 (40%)
50-60	12 (22.6%)	9 (27.3%)	3 (15%)
>60	2 (3.8%)	2 (6.1%)	0 (0%)
Marital status, n (%)			
Married	35 (66.0%)	27 (81.8%)	8 (40%)
Separated/divorced	6 (11.3%)	3 (9.1%)	3 (15%)
Single	3 (5.7%)	1 (3.0%)	2 (10%)
Widowed	9 (17.0%)	2 (6.1%)	7 (35%)
Education level, n (%)			
None	2 (3.8%)	1 (3.0%)	1 (5.0%)
Primary	27 (51.0%)	17 (51.5%)	10 (50.0%)
Secondary	18 (34.0%)	11 (33.3%)	7 (35.0%)
College/University	6 (11.3%)	4 (12.1%)	2 (10.0%)
Religion			
Catholic	13 (24.5%)	9 (27.3%)	4 (20.0%)
Lutheran	1 (1.9%)	1 (3.0%)	0 (0%)
Muslim	1 (1.9%)	0 (0%)	1 (5.0%)
Protestant	38 (71.7%)	23 (69.7%)	15 (75.0%)
HIV status-CD4 cell count			
<200			2 (10.0%)
200-500			1 (5.0%)
>500			6 (30.0%)
Not tested/unknown			11 (55.0%)
HAART			
Yes			18 (90.0%)
No			2 (10.0%)

AUTHOR CONTRIBUTIONS

All authors contributed to study design, protocol implementation, data analysis, and manuscript writing.

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CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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