

Residual disease challenge efforts to achieving successful cervical dysplasia treatment in women living with HIV in Botswana.

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Poster number: P217

Background

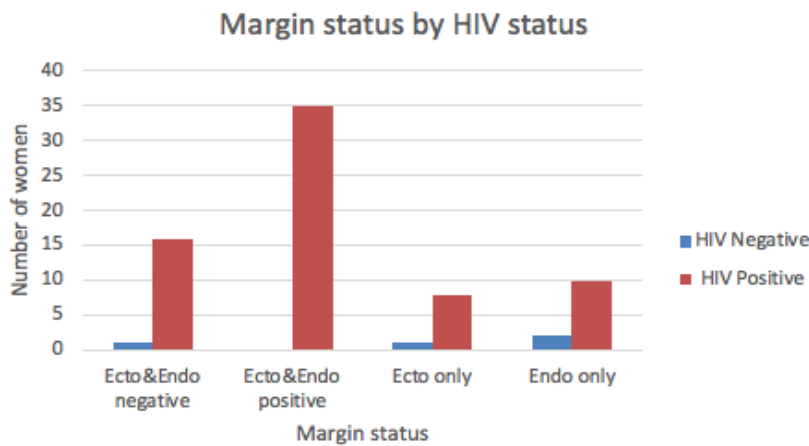
Cervical cancer is the 4th most common malignancy in women globally¹, and 1st most ranked in women in Botswana, especially those living with HIV. Cervical cancer is preceded by the CIN3 lesion and commonly treated with loop electrosurgical excision procedure (LEEP)². Women living with HIV are at high risk of cervical cancer development despite successful HAART³ and frequently experience residual disease and recurrence after treatment. The aim of this study was to determine the proportion of women with residual disease and predictive factors for recurrence after treatment with LEEP in WLWH.

Materials & Methods

Ethical approval was sought from the University of Botswana and Princess Marina Hospital Institutional Review Boards. A study permit, access to specimens and patient records were sought from the Ministry of Health. Archived formalin-fixed paraffin-embedded (FFPE) cervical tissues from women diagnosed with CIN2/3 were enrolled into the study. Clinical data associated with samples was extracted from electronic medical records. Tissue sections were cut and stained with p16 and H&E then reviewed with a consultant Anatomic Pathologist.

Results

80 FFPE tissues were enrolled from women aged 29-71 years (median, 41 years). 86% were from WLWH and on HAART; 97% were virally suppressed and 81% had CD4 cell counts >350/uL. Overall, 61% women had positive surgical margins and 58% having CIN3 with glandular involvement. Younger women (<49years) were more affected and 75% of the cervical lesions were p16 positive. Furthermore, 46.3% of the women had recurrent CIN3 after 6-12 months of follow-up.



Margin status	p16 staining results		
	Diffuse positive	Negative	Total
Ecto&Endo negative	4 (5.5)	12 (16.4)	16 (21.9)
Ecto&Endo positive	12 (16.4)	26 (35.6)	38 (52.1)
Ecto only	1 (1.4)	7 (9.6)	8 (11.0)
Endo only	1 (1.4)	10 (13.7)	11 (15.1)
Total	18 (24.7)	55 (75.3)	73 (100)

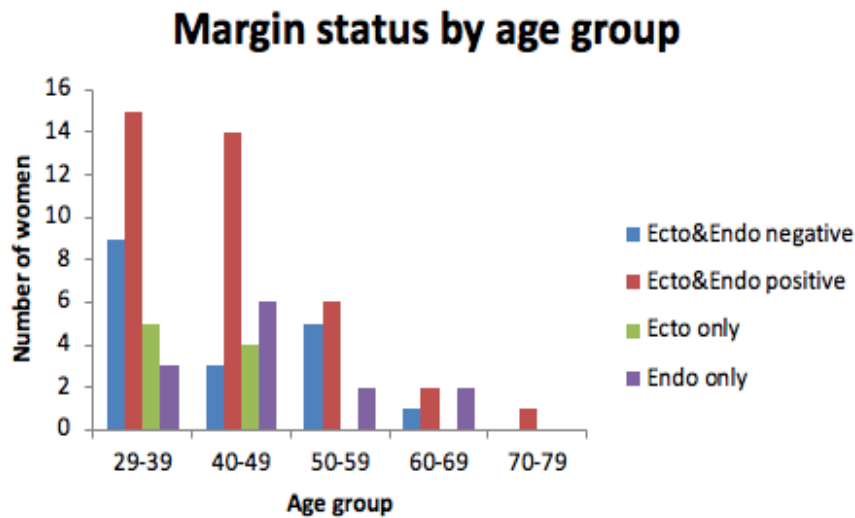
Fisher's Exact test, P-value = 0.146

Margin status	Viral suppression		Total
	Suppressed (<400 copies/ uL)	Unsuppressed (>400 copies/ uL)	
Ecto&Endo negative	15 (22.1)	0	15 (22.1)
Ecto&Endo positive	33 (48.5)	2 (2.9)	35 (51.5)
Ecto only	8 (11.8)	0	8 (11.8)
Endo only	10 (14.7)	0	10 (14.7)
Total	66 (97.1)	2 (2.9)	68 (100)

Fisher's Exact test, P-value = 0.243

Margin status	CD4 cell counts		Total
	<350	>350	
Ecto & Endo negative	1 (1.5)	14 (21.5)	15 (23.1)
Ecto & Endo positive	4 (6.2)	29 (44.6)	33 (50.8)
Ecto only	2 (3.1)	5 (7.7)	7 (10.8)
Endo only	3 (5.6)	7 (10.8)	10 (15.4)
Total	10 (15.4)	55 (84.6)	65 (100)

Fisher's Exact test, P-value = 0.207



Key points

- WLWH are at higher risk of cervical precancer and cancer development despite successful treatment with HAART.
- LEEP is considered safe and optimal for CIN2/3 treatment especially in younger women.
- WLWH frequently experience residual disease and recurrence after treatment despite HAART.
- Residual and recurrent disease challenge optimal treatment efforts in WLWH.

Conclusion

This study reports increased failure rates for CIN3 excisional treatment as indicated by positive margins and further confirms ongoing challenges with achieving successful cervical dysplasia treatment in WLWH, adding to the rising burden of cervical cancer cases in Botswana despite viral suppression. Findings call for increased efforts towards improved therapies for WLWH to achieve cervical cancer elimination targets.

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