ACTHIV17

Clinical outcomes and renal safety in HIV/AIDS patients on tenofovir-containing regimens in Lesotho

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BACKGROUND

- Tenofovir (TDF)-containing highly active antiretroviral (HAART) regimens are the most preferred in the treatment of HIV/AIDS in Lesotho
- Tenofovir (TDF) inclusion in HAART regimens has clinically shown to have an excellent efficacy and safety outcomes when compared with other-HAART regimens containing other first-line antiretroviral drugs, such as abacavir (ABC), stavudine (d4T) and zidovudine (AZT). [45]
- Although TDF use has been associated with acceptable safety, several studies have reported a rare manifestation of renal disease in HAART regimens that include TDF.[123678]

PROJECT AIM

To evaluate the clinical outcomes (weight and CD4 count) and renal safety (eGFR) in HIV/AIDS patients taking TDF-containing HAART regimens in Lesotho

METHODS

Descriptive, observational, longitudinal retrospective design was followed on 255 adult patients treated on TDF-containing HAART regimens at primary health care facility called Paballong HIV/AIDS care centre located in Berea district in Lesotho; from October 2015 to march 2016.

RESULTS

Body weight according treatment duration, sex and age at antiretroviral therapy initiation: Estimates of fixed effects

Parameter	Estimate	Std. Error	Df	t	*p* value	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	56.57	0.80	5414.89	70.75	0.00	55.10	58.13
Treatment duration	-0.003	0.002	188.66	-1.26	0.21	-0.01	0.002
[Sex=female]	2.64	0.39	5413.30	6.83	0.00	1.89	3.40
[Sex=male]	0	0					
Age at ART initiation	0.10	0.017	5414.39	5.52	0.00	0.06	0.13

CD4 cell count according to treatment duration, sex and age at antiretroviral therapy initiation: Estimates of fixed effects

Parameter	Estimate	Std. Error	df	T	*p* value	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	179.67	21.58	1585.19	8.33	0.00	137.33	222.10
Treatment duration	0.20	0.03	103.01	7.62	0.00	0.15	0.27
[Sex=female]	69.13	10.35	1588.70	6.68	0.00	48.83	89.43
[Sex=male]	0	0					
Age at antiretroviral therapy initiation	1.32	0.47	1591.99	2.78	0.00	0.39	2.25

Estimated glomerular filtration rate according to treatment duration, sex, age at antiretroviral therapy initiation and body weight: Estimates of fixed effects

Parameter	Estimate	Std. Error	df	t	*p* value	95% Confidence Interval	
						Lower Bound	Upper Bound
Intercept	143.84	7.17	923.10	20.07	0.00	129.77	157.91
Treatment duration	0.000	0.003	153.24	0.23	0.82	-0.01	0.007
[Sex=female]	-13.05	2.36	900.44	-5.54	0.00	-17.67	-8.43
[Sex=male]	0	0					
Age at antiretroviral therapy initiation	-0.78	0.10	887.00	-7.50	0.00	-0.99	-0.58
Body weight	-0.02	0.09	903.84	-0.25	0.80	-0.20	0.16

CONCLUSIONS

(1) Clinical outcomes manifesting by weight gain and CD4 cell count elevation improve upon initiation of antiretroviral therapy at any age.

(2) Females are far more at advantage to experience better clinical outcomes than males over the treatment duration.

(3) The renal function is progressively deteriorated following initiation of antiretroviral therapy at any age.

(4) Females experience more renal compromise than males over the treatment duration.

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