



Seroreversion in a 45 year old Filipino with HIV: A Case Report

BACKGROUND

CAS-110

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HIV antibody seroreversion occurs when antibodies decrease below detectable levels in a patient with good virologic response to antiretroviral therapy.

CASE PROPER

This is 45-year-old bisexual cis-gender male diagnosed with HIV-1 in August 2009. Particle Agglutination for HIV 1/2, Vironostika HIV Ag-Ab, Genscreen HIV Ag-Ab, and Genelabs Western Blot were used in the diagnostic algorithm. Baseline CD4+ count was 390 cells/uL. He was started on Zidovudine/ Lamivudine/Nevirapine with good adherence. HIV RNA was undetectable after six months of ART and remained undetectable during monitoring.

On December 2023, he self-conducted an HIV RDT (Abbott Bioline HIV 1/2 3.0), revealing non-reactivity. Blood was sent to SLH-SACCL on January 2024 showing nonreactivity to CLEA, reactivity to ELFA, and indeterminate immunochromatography (ICT), with one band for GP41, rendering indeterminate results. He was advised to continue ART and repeat testing after 3 months. On March 2024, CLEA and ELFA were reactive; ICT was positive, with two bands for gp160 and gp41. He was advised on his false-negative RDT, and his positive confirmatory test. He continued his ART with good compliance.

CONCLUSION

Seroreversion in virologically suppressed PLHIV with long-term ART is usually documented using 2nd/3rd generation RDTs, detecting gp41, the major antibody in PLHIV. False-negative RDTs can occur due to antibody disappearance in virologic suppression, especially in early ART recipients.

Retesting people on long-term ART contributes to false-negative diagnoses, leading to confusion and potential treatment termination due to misconceptions of cure. Educating PLHIV on seroreversion and the misuse of RDTs can prevent such consequences.

DATE	TEST	RESULT
08/07/09	Serodia Particle Agglutination Test HIV 1/2	Reactive
	Vironostika HIV Ag-Ab	Reactive
	Genscreen HIV Ag-Ab	Reactive
	Western Blot	Positive HIV-1
09/16/19	Immunochromatography SD Bioline HIV 1/2	Reactive
12/14/23	Abbott Bioline HIV 1/2 3.0	Nonreactive
01/11/24	CLEIA (SYSMEX HICL Ag+Ab)	Nonreactive
	ELFA (Vidas HIV Duo ultra)	Reactive
	ICT (Biorad Geenius HIV 1/2 Confirmatory Assay)	Indeterminate
	Bands present	gp41
03/06/24	CLEIA (SYSMEX HICL Ag+Ab)	Reactive
	ELFA (Vidas HIV Duo ultra)	Reactive
	ICT (Biorad Geenius HIV 1/2 Confirmatory Assay)	Positive
	Bands present	gp 160, gp 41