

Indeterminate rapid HIV-1 test results among antenatal and postnatal mothers

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Abstract:

Summary: The sensitivity and specificity of rapid HIV-1 tests may be altered during pregnancy and postpartum. We conducted a study to determine the prevalence and correlates of false-positive Abbott Determine TM and false-negative Uni-GoldTM rapid HIV-1 test results among antenatal and postnatal mothers attending a primary care clinic in Nairobi, Kenya. Mothers were tested for HIV-1 using Abbott DetermineTM and non-reactive results were considered HIV-1 antibody negative. Reactive samples by Determine were re-tested by Uni-GoldTM. Vironostika HIV-1 and Uni-FORM II Enzyme-linked immunosorbent assays were used to confirm samples that had positive Abbott Determine TM and negative Uni-GoldTM. Among 2311 women who accepted HIV-1 testing, 1238 (54%) were tested antenatally and 1073 (46%) were tested postnatally. Of tested women, 274 (12%) women were reactive by Abbott Determine TM and on retesting with Uni-GoldTM 30 (11%) had indeterminate results. The prevalence of indeterminate results was significantly higher in antenatal women than in postnatal women (2% versus 1%, $P=0.03$). In conclusion, indeterminate rapid HIV-1 test results are more common in the antenatal period and appropriate safeguards to confirm HIV-1 infection status should be implemented in antenatal programmes.