

Performance of HSV-2 type specific serological tests in men in Kenya.

Abstract:

This study compared five serological tests with Western blot from University of Washington to determine the most accurate method for detecting antibodies to herpes simplex virus type 2 (HSV-2) in a male population in Kisumu, Kenya. A random sample of 250 fishermen from 18 beaches along Lake Victoria underwent serological testing by two generations of the HerpeSelect HSV-2 ELISA ("Focus Gen 1" and "Focus Gen 2"), Kalon HSV-2 ELISA ("Kalon"), Biokit HSV-2 Rapid Test ("Biokit"), and HerpeSelect Express Rapid HSV-2 ("Express") against the Western blot test ("WB") as the "gold standard". Sensitivity and specificity of tests in this population with a high prevalence of HSV-2 (58% by WB) were: Focus Gen 1: 98.6% and 63.5%; Focus Gen 2: 99.3% and 52.3%; Biokit: 66% and 90.9%; Express: 99.3% and 44.3% and Kalon: 98.6% and 85.7%. Increasing the positive cut-off value improved the specificity of the Focus Gen 2-84.9% and Kalon to 92.2%. Focus Gen 2 offered no improvement in specificity over that of Focus Gen 1. Neither rapid assay could be recommended as either a stand-alone assay or as a confirmatory test. The results of Kalon using a cut-off of 1.5 were the most concordant with those of WB for all the approaches tested. However, low positive Kalon test results should be interpreted with caution as they could reflect early seroconversion or false positive results.