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Performance of Visual Inspection Using Acetic Acid for Cervical Cancer Screening as Compared to HPV DNA Testingin Ethiopia: A Comparative Cross-Sectional Study

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Abstract : Objectives: The aim of this study is to evaluate the performance of visual inspection using acetic acid compared with HPV DNA testing among women living with HIV in Ethiopia. Methods: Acomparative cross-sectional study was conducted to address the aforementioned objective. Data were collected from January to October 2021 to compare the performance of these two screening modalities. Trained clinicians collected cervical specimens and immediately applied acetic acid for visual inspection. The HPV DNA testing was done using Abbott m2000rt/SP by trained laboratory professionals in accredited laboratories. A total of 578 HIV positive women with age 25-49 years were included. Results: Test positivity was 8.9% using VIA and 23.3% using HPV DNA test. The sensitivity and specificity of the VIA test were 19.2% and 95.1%, respectively, while the positive and negative predictive values of the VIA test were 54.4% and 79.4%, respectively. The strength of agreement between the two screening methods was poor (k=0.184), and the area under the curve was 0.572. The burden of genetic distribution of high risk HPV16 was 3.8%, and mixed HPV16& other HR HPV was 1.9%. Other high risk HPV types were predominant in this study (15.7%). Conclusion: The high positivity result using HPV DNA testing compared with VIA, and low sensitivity of VIA are indicating that the implementation of HPV DNA testing as the primary screening strategy is likely to reduce cervical cancer cases and deaths of women in the country.

Keywords : cervical cancer screening, HPV DNA, VIA, Ethiopia
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