

Detection of EBV and High-Risk HPV Predicts Concurrent Anal Dysplasia in HIV+ Women

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Introduction:

Women living with HIV (WLWH) are at increased risk for developing anal dysplasia and cancer. Anal Pap smear and anal HPV DNA detection are tools to risk stratify those at risk for anal dysplasia and many need follow up with high resolution anoscopy which is limited in many setting. What is needed are additional tools to stratify those at highest risk for development of AIN3. Detection of EBV in cervical fluids has been shown to increase the risk for cervical dysplasia. This study examines the role of anal EBV detection in predicting anal dysplasia in WLWH

Methods:

Participants were enrolled in a longitudinal study of the role of EBV in anal and cervical dysplasia. Anal swabs were collected for detection of high-risk HPV and EBV. An additional anal swab was collected for pap smear determination using the Bethesda 2000 system. Anal biopsies results, if obtained, were also collected as well as demographic information.

Results:

Participants were 143 WLWH enrolled in a longitudinal study of the role of EBV in anal and cervical dysplasia. They were 78% African-American with an average age of 47 years. High risk HPV was detected in 65%, EBV in 55% and both viruses in 42%. Abnormal Pap smear were seen in 56%, HSIL in 2.4%, LSIL in 15% and ASCUS in 39%. Detection of both HPV and EBV predicted concurrent dysplasia (ASCUS and above) 74% vs only 31% when not detecting either virus. Dual detection was associated with dysplasia (LSIL and HSIL) 50% vs detection of only HPV, 35%, OR =4.4, p=0.05.

Conclusions:

In this relatively small cohort of WLWH who are at-risk for HPV-related anal dysplasia and cancer, detection of EBV in conjunction with HPV was associated with an increased risk of dysplasia. The exact role of EBV is under investigation. EBV detection could be a tool to triage those at highest risk for anal cancer.