Title: High-risk HPV DNA genotyping for primary cervical cancer screening compared with cytology and colposcopy in HIV-positive women: preliminary results

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I. Abstract Body (up to 250 words)

Objective: HIV infected patients are more susceptible for persistent human papillomaviruses (HPV) infections, at 100fold higher risk for cervical cancer, and screening is suboptimal. We investigated the prevalence of HR-HPV in HIV-infected women and correlated to colposcopy and cytology, viral oncogenes E6 and E7, and biomarker p16 and Ki-67 expression.

Methods: Gynecological examination, cervical cytology, HR-HPV (MPG-Luminex PCR), biomarker detection, colposcopy, and biopsy were done. Data were entered into a SPSS database. A two-tailed p-value ≤ 0.05 was considered statistically significant.

Results: 30 patients (median age 34 years) were enrolled. 51.7% were from Sub-Saharan Africa (SSA), 34.5% Western European, 6.9% Eastern European, 3.4% each from Middle East and Asia. 55.2% tested HR-HPV positive (48.3% HPV16, 20.7% HPV52, 17.2% HPV66, 13.8% HPV56). 87.5% had multiple infections. 26 had pap smear (34.6% Pap I, 38.5% Pap IIa, 7.7% Pap IIp, 11.5% Pap IIID1, and 7.7% Pap IIID2). Colposcopy was normal in 65.5%, 13.3% minor change, 3.4% major change, 17.2% inevaluable (T3-zone). There was no significant correlation of HR-HPV and PAP cytology (p=0.110) or colposcopy (p=0.146). Neither viral oncogene expression of E6 (cytology (p=0,400); colposcopy (p=0,866)) and E7 (cytology (p=0.156); colposcopy (p=0.612)) nor cellular biomarker expression p16 (cytology (p=0.055)), and Ki-67 (cytology (p=0.231); colposcopy (p=0.537)) correlated significantly. p16 expression and colposcopy correlated significantly (p=0.000).

Conclusion: HR-HPV prevalence in HIV infected women is high, with high genotype variety, and multiple infections. HPV and biomarker expression doesn't correlate with clinical findings. Additional markers differentiating between clinically relevant and irrelevant HR-HPV-infections in women with HIV are needed.

II. Reference:

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