COMPARISON BETWEEN HYBRID CAPTURE II AND POLYMERASE CHAIN REACTION RESULTS AMONG WOMEN AT LOW RISK FOR CERVICAL CANCER

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PURPOSE: Hybrid Capture (HC) is a new and powerful tool to detect DNA/RNA of several infectious agents. Regarding HPV DNA detection HC II has shown no false positive results due to contamination and its inter-laboratory reproducibility reaches 98%. It is also simpler and costs less than other methods such as Polymerase Chain Reaction (PCR) and it has shown a high correlation to clinical findings. Our objective is to compare HC II and PCR results among women at low risk for cervical cancer.

METHODS: This is a cross-sectional study which enrolled 977 asymptomatic women aged 15 and 70 years. Squamous columnar junction samples were obtained and analyzed for HPV DNA either by HC II and PCR. Epidemiological factors and cyto-pathologic results were related to HPV DNA status. The Pearson Chi-square test and multiple logistic regression were performed to relate epidemiological and cytopathological variables and HPV DNA status.

RESULTS: About 15.4% and 15.9% of women were HPV DNA positive by HC II and PCR respectively. Both were highly associated with cytology (P < 0.0001). The correlation to histopathology was also good with a higher significance for HC II. Factors related to HPV DNA detection by PCR were: oral contraceptive use (OR = 1.2; 95% CI = 1.2–1.2); history of genital HPV infection (2.11; 1.13–4.59); 3 or more sexual partners (1.35; 1.10–1.83); education (<primary (1.43; 1.01–1.99); secondary (1.42; 1.03–1.99). For the HC II the related variables were: being single (1.2; 1.01–1.2); aged sixteen years or less at first sexual intercourse (1.37; 1.03–1.89).

CONCLUSIONS: The results suggest that HC II is highly comparable to PCR regarding HPV DNA detection. HC II is also significantly associated with cytology and histopathology results indicating that it may be used as adjunctive or stand-alone test for screening programs.