EVALUATION OF A NEW HOME-BASED SELF-VAGINAL COLLECTION DEVICE FOR DETECTION OF CHLAMYDIA TRACHOMATIS AND NEISSERIA GONORRHOEAE

Introduction

Self vaginal sampling is a new collection approach for detection of Sexually Transmitted Infections and is able to guarantee privacy and comfort during the collection. The aim of the study was to evaluate usability, vaginal cells collection efficiency and ability to preserve nucleic acids stability of a new self vaginal flocked swab (FLOQSwab™, Copan) developed for home collection.

Methods

80 donors (age 18 to 45) performed a double self-vaginal sampling (n=160) using: a certified flocked self-vaginal sampling (Copan); a new home-based self-vaginal flocked swab by following the kit instructions. Patients received a questionnaire to assess the usability of the new device. Home-based and POC self vaginal swabs have been processed using Xpert CT/NG molecular assay.

Results

All 54 spiked samples have been correctly detected. 77/80 negative and 3/80 positive patients were detected. No cross-reactivity was observed home and POC.

Conclusion

Home-based self vaginal collection (80%) with high performance are accepted home-based self vaginal collection (80%) with the new device. A new self vaginal flocked swab (FLOQSwab™, Copan) was able to guarantee privacy and comfort during the collection.

CHARACTERISATION OF IMMUNOGLOBULIN A/G RESPONSES DURING 3 DOSES OF THE HUMAN PAPILLOMAVIRUS-16/18 AS04-ADJUVANTED VACCINE

Introduction

Individuals receiving the human papillomavirus (HPV) vaccine develop high levels of circulating neutralising antibodies. However, data about antibody responses in the cervix are limited.

Methods

This study was designed to describe the course of IgA/IgG responses in cervical secretions and in serum after intramuscular administration of the HPV16/18 AS04-adjuvant vaccine. An enzyme linked immunosorbent assay for detection of IgA and IgG anti–HPV16/18 was developed for this purpose.

Results

Immunoglobulin G seroconversion after the second dose was observed in 100% of the participants and remained high after the final dose. Immunoglobulin A seroconversion was observed in 76.7% of women after the third dose. Lower levels of IgA were detected in the cervical mucus (28.3%) and decreased to 23.3% after the last dose. Comparing local and systemic IgG responses, positivity in both serum and cervical samples was observed in 85%, whereas in 15% only, the serum was IgG antibody positive. A weak agreement between local and systemic IgA responses was observed. Only 18.3% of participants were local and systemic IgA positive, 58.4% were positive only in serum, 5% were positive only in the cervical samples.

Conclusion

The produced antibodies will be used to study the pathogenesis of Gardnerella vaginalis during the development of BV.
Development of an ELISA-Assay for Detection of IgA and IgG Against Human Papilloma Virus

Ana Paula Ferreira Costa, Paula Renata Lima Machado, Anaïna Oliveira Cristipim, Eleutério Júnior, Paulo César Giraldo, Ana Katherine Gonçalves anaina Oliveira Cristipim, Federal University of Rio Grande do Norte, Natal, Brazil

Introduction: The interest in human papilloma virus (HPV) seropositivity has increased considerably since HPV vaccines have become available worldwide. The aim of this study was to assess the performance of enzyme-linked immunosorbert assay (ELISA) in analysing serum samples provided from women with and without genital DNA-HPV infection confirmed by polymerase chain reaction (PCR), for detection of specific antibodies of the isotypes IgG and IgA recognising HPV-16 and -18, as well as virus-like particles (VLPs).

Methods: 50 sexually active female patients between 18 and 33 years of age from the outpatient clinic at the university hospital were enrolled. In order to test them, positive controls were obtained from patients with HPV-induced lesions and who were DNA-HPV positive confirmed by PCR. A specific assay was used to identify antibodies to HPV VLPs by ELISA. The samples were divided into HPV positive and negative, and an ELISA detecting IgA and IgG anti-HPV-VLP was carried out.

Results: The effectiveness of ELISA and the kappa (k) index was obtained from the values entered in the receiver operating characteristic (ROC) curves for IgG and IgA. IgG-VLP-HPV-16 showed a good correlation between ELISA and PCR (k=0.75), and IgG-VLP-HPV-18 showed a very good correlation between ELISA and PCR (k=0.84). While the IgA antibody correlation was also positive, although weaker, IgA-VLP-HPV-16 was moderate (k=0.45) and IgA-VLP-HPV-18 good (k=0.66). The specificity of the assay concerning IgG was: sensitivity, specificity, and accuracy were 82.3%, 92%, and 88% to IgG-VLP-HPV-16, and 100%, 92%, and 94% to IgG-VLP-HPV-18. The assay concerning IgA was: sensitivity, specificity, and accuracy were 64.7%, 80%, and 73.8% to IgA-VLP-HPV-16, and 100%, 80%, and 84.8% to IgA-VLP-HPV-18.

Conclusion: IgG and IgA antibodies against HPV-16 and -18 can be detected in unvaccinated individuals by using the VLP that serve as the basis for bivalent HPV vaccine. The values for ELISA assays and the values found for IgG correlate good/very good with HPV-16/18 detected by PCR.

In Silico Multilocus Sequence Typing of Chlamydia Trachomatis Plasmids Shows Clustering of Isolates According to the Disease Related Biovars

Bart Venteeg, Sylvia Bruisten, Odile Hansot, Keith Jolley, Martin Maiden, Arië Van Der Ende, Yvonne Pannenkoek, Public Health Service Amsterdam, Amsterdam, The Netherlands; University of Oxford, Oxford, UK; Academic Medical Centre, Amsterdam, The Netherlands

Introduction: Nucleotide sequencing of the ompA gene, encoding the outer membrane protein MOMP, divides C. trachomatis into 15 main genovars comprising three biovars associated...