

Prevalence of vaccine type infections in vaccinated and non-vaccinated young women: HPV- IMPACT, a self-sampling study.

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Context:

The Human Papillomavirus (HPV) vaccination program for young girls aged 11-26 years has been introduced in Switzerland in 2008. Since then, important public funds have been committed to the program, requiring an evaluation of its impact on society.

Objectives:

Objective of this study was to evaluate prevalence of high and low risk HPV in a population of undergraduate female students and possibility of using self-sampling as tool to monitor effectiveness of the vaccination program.

Methods:

- Undergraduate women aged between 18-31, attending the medical school and school of health sciences in Geneva were invited to participate in this study
- Included women were asked to perform vaginal self-sampling using a dry cotton swab.
- Participants who were HPV-positive were invited to repeat self-sampling every 6 months until they cleared off the virus.

Results:

- 409 student participated in our study, of whom 69% had been three dose vaccine against HPV.
- 32% were infected with one or more HPV strains; 7.2 % of non-vaccinated population were HPV-16 or 18 positive but only 1.1 % of the vaccinated girls were infected by HPV 16 or 18 ($p < 0.001$).
- Prevalence HPV 6 and 11 is 8.3 % in non-vaccinated women versus 2.1 % in vaccinated women ($p < 0.02$). We can observe no statistical difference for other HPV strain between groups of vaccinated or non-vaccinated women.
- Overall, 100% of the participants accepted to repeat self-sampling in order to evaluate their HPV clearance over time, and 88% of the participants reported that they would prefer self-sampling to the conventional Pap smear for HPV screening.

Conclusions:

This study shows that HPV vaccine is associated with a significant reductions of HPV 6 -11-16 and 18 prevalence in young women and also that screening by self-sampling is well accepted as a tool for screening and monitoring effectiveness of HPV vaccination in a population of under graduate medical and non-medical. These data are welcoming and allay the concern that HPV vaccination and self-sampling screening must be reinforced in Switzerland.