A VERY HIGH PREVALENCE OF HUMAN PAPILLOMAVIRUS IN HIDDEN POPULATION OF SWINGERS: A DUTCH CASE-CONTROL STUDY

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Background: Swingers are at high risk for acquiring sexual transmitted infections (STI). The prevalence of human papillomavirus (HPV) in this population is unknown. This information is necessary to assess whether this high risk population should be included in the HPV prevention strategies. In this case-control study the prevalence of HPV in female swingers was tested.

Methods: Vaginal swabs were collected from 94 female swingers (median age 45 years), visiting an STI clinic between October 2010 and December 2013 in South Limburg, the Netherlands. Ninety-three vaginal swabs from women visiting their general practitioner in this region, were matched in age and time of visit. Broad-spectrum HPV DNA amplification and mucosal HPV genotyping were performed using the highly sensitive SPF10 DEIA-LiPA25 system (DDL Diagnostic Laboratory, Rijswijk).

Results: In 98% of swingers HPV was detected compared to 18% of the matched controls. Of these HPV positive swingers, 75% carried at least one high risk type (hr-type). Twenty-eight percent carried hr-types only, 25% carried low risk types (lr-types) only and 47% carried one or more concurrent hr- and lr-types. There were no significant differences between the control group and the swingers in type of carriage (hr-type, lr-type, mixed). Hr-type 52 was most prevalent in swingers, followed by hr-types 31 and 53 (23%). Hr-types 16 and 18 were detected in 15%, respectively 11% of swingers. In the control group most prevalent were hr-types 15, 51 and 53, detected in 18% of HPV positive women.

Conclusion: In this study an unprecedented high HPV prevalence of 98% was found in female swingers, which was 5 times as much as in matched controls. Of the HPV positive swingers, a worrisome 75% carried at least one hr-type, detected with this highly sensitive detection method. These prevalence rates suggest a potential high HPV disease burden in this population and therefore targeted HPV prevention strategies are necessary.

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