

P827

# 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-types 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 16, 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.

**Disclosure** No significant relationships.

P828

# USE OF HORMONAL CONTRACEPTIVES AND GENITAL HUMAN PAPILLOMAVIRUS INFECTION: A NATIONAL MULTICENTER STUDY

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**Background** Available data suggest mixed evidence of hormonal contraceptives (HC) on the association with high-risk human papillomavirus (HPV) types, the main cause of cervical cancer. Therefore, we aimed to analyze the use of HC and the prevalence of HPV in unvaccinated Brazilian women aged 16–25 years.

**Methods** We analyzed cross-sectional data collected from 5,268 sexually active women who participated in the National Survey of Human Papillomavirus Prevalence (POP-Brazil). This survey enrolled participants from all 26 Brazilian capitals and the Federal District. Professionals from primary care units were trained for specimen and data collection. All participants answered a face-to-face questionnaire and provided biological samples for genital HPV analysis. HPV genotyping for HPV types was done using the Roche PCR-based Linear Array Genotyping Test. Sampling weights by sex and age were applied to the data.

**Results** The majority of the participants use any type of contraception [76.58% (95% CI 74.82 - 78.35)], being 2,577 [47.59% (45.54% - 49.63%)] on hormonal contraceptives. The use of HC was more frequent in older women ( $\geq 22$  years), with higher education, married or living with a partner, and those with less than two sexual partners in the last year. No significant difference was found between the prevalence of high-risk HPV types and the use of HC: 38.57% among users of HC vs. 38.56% among don't users of HC ( $p = 0.994$ ). Multivariate analysis showed that HC was not associated with high-risk HPV even after adjusting for age, educational level, presence of partner, smoke, and number of partners.

**Conclusion** Use of HC was not associated with HPV DNA detection. Even so, more studies are necessary evaluating the type of hormonal contraceptive, as well as length and dose of use.

**Disclosure** No significant relationships.

P829

# HUMAN PAPILLOMAVIRUS TYPES DISTRIBUTION IN HEAD AND NECK: A META-ANALYSIS FROM INFECTION TO CANCER

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**Background** Human papillomavirus (HPV) has been shown to be involved in the carcinogenic mechanisms of non-genital malignancies such as head and neck cancers. Particular HPV types may preferentially progress from infection to cancer of head and neck. However, prospective data on the carcinogenesis process of head and neck cancer remain limited. We aimed to assess data on the relative carcinogenic potential of HPV that can inform head and neck cancer prevention through vaccination and screening.

**Methods** We systematically reviewed relevant literature in MEDLINE, Embase and Cochrane Library to identify studies published before April, 2018, which reported type-specific HPV prevalence at head and neck. We pooled type-specific HPV prevalence across the full spectrum of head and neck diagnoses, from normal cytology to head and neck cancer, stratifying anatomical site, gender, region and HIV status.

**Results** A total of 150 studies were included in our review, contributing 6985 cases of normal cytology, 1782 cases of head and neck lesions, and 13587 cases of head and neck