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 (≥ 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.

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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

cancer. In HIV-negative individuals, pooled HPV prevalence was 6.42% (95% CI: 4.13–9.18%) for normal cytology, 18.86% (95% CI: 10.84–28.49%) for head and neck lesions, and 28.86% (95% CI: 24.26–33.70%) for head and neck cancer. Pooled HPV 16 prevalence increased with diagnosis severity, from 2.14% (95% CI: 0.86–3.94%) in normal cytology to 20.47% (95% CI: 16.58–24.65%) in head and neck cancer in HIV negative individuals. HPV prevalence varied by diagnosis, subsite, region, but not by gender. Data for HIV-positive patients were too limited to analyze.

Conclusion In HIV negative individuals, HPV prevalence increased with diagnosis severity. And HPV 16 was the most carcinogenic HPV type in head and neck, with enrichment from normal cytology to head and neck cancer.

Disclosure No significant relationships.

P830 FEASIBILITY OF AN ONLINE HPV SELF-COLLECTION SCREENING PROGRAM IN CANADA: DIGITAL HEALTH LITERACY IN SOUTH ASIAN WOMEN

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Background Women who do not regularly attend cervical cancer screening are at increased risk for cervical cancer. In British Columbia (BC), approximately 30% of women aged 21–69 years are under-screened. As cervical cancer screening in BC moves towards the use of primary HPV testing, there is an opportunity to address screening barriers women face through self-collected, rather than clinician collected specimens. Cervix-Check is an internet-based program for HPV self-collection being piloted in communities across BC with low screening rates. To inform the implementation of CervixCheck, we investigated digital health literacy (DHL) in South Asian women.

Methods A cross-sectional anonymous survey was administered July–August 2018 through collaborating primary care clinics in predominantly South Asian communities in the Fraser Health Region of BC. The study population was a convenience sample of women 30–65 years of age, presenting at a primary care clinic. Women were administered the survey on a tablet, which collected demographic, screening history, and internet use information. DHL was measured using the validated eHEALS and Digital Health Literacy Instruments.

Results 51 women participated from four family practices where 30% of women were 50 years or older. 29.4% of women self-reported not having had a Pap test in the last 3 years. English (86%) and Punjabi (58%) were the most common languages participants reported reading and speaking. Majority of women reported using the internet daily (82.4%), with mobile phones being the most common device (72.6%). DHL was higher in under-screened women. Over 80% of women responded that they would be likely to very likely to participate in self-collected screening using CervixCheck.

Conclusion The survey revealed CervixCheck is a promising digital health platform to increase cervical cancer screening uptake among under-screened South Asian women. Findings were used to inform CervixCheck website design and program resources in preparation for its launch.

Disclosure No significant relationships.

P831 CHARACTERISTICS ASSOCIATED WITH HPV-RELATED EXTERNAL GENITAL LESIONS AMONG YOUNG ADULTS IN BRAZIL

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Background HPV-related external genital lesions are the most common outcome of HPV infection, a sexual transmitted disease responsible by low-grade squamous intraepithelial lesion (LSIL) and 99% of cervical cancer. The aim of this study was to assess the prevalence of HPV-related lesions and associated factors in the Brazilian young adult population.

Methods We included 7,694 unvaccinated people from 16 to 25 years recruited from primary care units and submitted to interview, genital examination and cervical/penile sampling. Linear Array® Test (Roche) was used for HPV detection and genotyping.

Results The prevalence of HPV-related lesions was 4% (234), being more frequent in men (5.8%) than women (2.3%). From those, 63% ($p < 0.03$) were positive to HPV. The HPV genotyping distribution comprised all the 37 HPV types tested. However, the more frequent types were the 16 (12.5%), 6 (9.2%), 11 (8.8%), 62 (8.7%), 58 (8.4%), 52 (8.2%) and 51 (8%). Number of sexual partners in the last year ($p = 0.0005$), multiple HPV infection ($p < 0.0247$), smoking ($p = 0.04$), use of hormonal contraceptives ($p = 0.04$) and presence of other STIs ($p < 0.0001$) were associated with the presence of lesion.

Conclusion We found a high prevalence of genital lesion in this young adult population. As expected, most participants were HPV positive. Although HPV 16 was not usually related to external lesions, it was the most frequent HPV type found followed by HPV 6 and 11. Sexual behavior, smoking and hormonal contraception were the main factors associated with genital lesions. Increase awareness about healthy sexual behaviors and immunization coverage should be used as a target to prevent HPV infection and related lesions in the young Brazilian population.

Disclosure No significant relationships.

P832 EFFECTIVENESS OF THE QUADRIVALENT HPV VACCINE AGAINST HSIL AND CIN: A DATA-LINKAGE STUDY

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Background Although originally approved for three-doses, two doses of the HPV vaccine are now approved for 9–14 year olds in British Columbia (BC), Canada. Post-hoc analyses have shown similar efficacy compared to three-doses even after