

P3.206 KNOWLEDGE OF HUMAN PAPILLOMAVIRUS AND ITS PREVENTION AMONG UNIVERSITY STUDENTS IN RIO DE JANEIRO, BRAZIL

¹Silvia Maria Baeta Cavalcanti, ²Aimée Denzeler Baptista, ²Carolina Xavier Simão, ²Helena Dutra Campos, ²Vitória Carvalho Guimarães Dos Santos, ³Juliana Gil Melgaço, ²Claudia Lamarca Vitral. ¹Universidade Federal Fluminense, Niterói – RJ, Brazil; ²Universidade Federal Fluminense, Niterói – RJ, Brazil; ³Fiocruz, Niterói – RJ, Brazil

10.1136/sextrans-2017-053264.441

Introduction Human papillomavirus (HPV) infection is the most prevalent sexually transmitted virus in the world. One of the barriers to the implementation of prevention programs against the disease is the limited knowledge possessed by most populations regarding the virus and its possible consequences.

Methods A total of 473 students aged 18 to 78 years (mean 28.2 ± 9.35) from two public universities from Rio de Janeiro State attending different undergraduate courses from health and non-health area, answered a questionnaire about transmission, clinical features and the possible consequences of persistent HPV infection. The questionnaire was self-applied under the supervision of the authors.

Results Although most of the students independent of the study area had already heard of HPV (99.3% from health and 92.2% non-health courses), a significant portion did not associate virus infection with the appearance of warts in the genital tract (40.3% from health and 62.7% from non-health courses). Among female students enrolled in non-health courses, 61.1% did not recognise cervical cancer as a possible consequence of HPV infection. Considering the knowledge of risk situations as a basic form of prevention of HPV infection, only 33.2% of the students from non-health courses identified 3 or 4 of the four HPV infection risk situations presented in the questionnaire. Even the use of condoms, a basic STD prevention attitude, was not recognised by 13% of the students interviewed regardless of the attending course. At the end of the interview all participants received an informative folder on the issues investigated.

Conclusion Results highlight the need for educational campaigns regarding HPV infection, its potential as a cervical cancer agent and the forms of prevention available among university students.

P3.207 HUMAN PAPILLOMAVIRUS INFECTION IN ORAL AND ANOGENITAL SITES: PREVALENCE AND RATES OF CONCORDANCE

Silvia Maria Baeta Cavalcanti, Thaissa Isaías Cordeiro, Fernanda Nahoum Carestiato, Willker Menezes da Rocha, Daniele Ceperuelo Lisboa, Raquel da Hora Barbosa, Mauro Romero Leal Passos, Tegnus Depes De Gouvea. Universidade Federal Fluminense, Niterói – RJ, Brazil

10.1136/sextrans-2017-053264.442

Introduction HPV infection causes cancer at several anatomical sites. However, the natural history of the infection in non-cervical sites have been understudied, especially at the oral epithelium.

Methods In our study, we investigated 351 samples from three different sites of 117 patients, searching for HPV. By generic and specific PCR and Microarray, and related risk factors.

Results HPV DNA prevalence was 89.5% (105/117) in the genital lesions, 53.8% (63/117) in oral samples and 59% (69/117) in anal samples. Regarding the risk factors associated with HPV in the genital lesions, we found statistically

significant rates for oral ($p=0.039$) and anal sex practices ($p=0.0000012$). For oral samples, we observed a relevant correlation concerning oral contraceptive use ($p=0.039$), tobacco smoking ($p=0.036$) and alcohol use ($p=0.0075$) while in anal samples, we found higher risk for HPV infection in patients relating non-exclusive sexual partners ($p=0.013$). The presence of viral DNA in all the three sites was observed in 36.8% of the cases (43/117). Among them, 18% (21/117) presented concordant HPV genotypes, diverging from the literature, corroborating that there is still much to learn about HPV natural history, since different biological behaviours are expected within different populations.

Conclusion In our study we also evaluated if the detection of oral HPV would suggest an infection in the anogenital tract. Nevertheless, our results showed only 36.8% of correlation pointing out that it is not suitable as an auxiliary biomarker for HPV anogenital infections.

P3.208 THE INFECTION WITH HUMAN PAPILLOMAVIRUS (HPV) TYPE 16 FEATURES GREATER CHANCE TO P16INK4A GENE METHYLATION IN CERVICAL LESIONS COMPARED TO OTHER VIRAL TYPES

Silvia Maria Baeta Cavalcanti, Willker Menezes da Rocha, Raquel Da Hora Barbosa, Larissa Alves Afonso, Kátia Cristina da Silva, Gutemberg Almeida, Mauro Romero Leal Passos, Silvia Maria Baeta Cavalcanti. Universidade Federal Fluminense, Niterói – RJ, Brazil

10.1136/sextrans-2017-053264.443

Introduction Studies have shown that persistent infection by high risk human papillomavirus (HR-HPV), especially type 16, is responsible for cervical cancer development. For the development of a malignant phenotype, several mechanisms are involved, among them the process of epigenetic DNA methylation, which results in gene silencing, leading to abrogation of cell cycle control, escape from senescence, and induction of proliferation, that therefore can collaborate in carcinogenesis. Understanding how the epidemiological factors can influence the mechanism of methylation related to infection of the HR-HPV is an unclear situation to be unveiled. The objective of this study was to evaluate the infections caused by HPV16 in patients attended at Gynaecology Institute, of UFRJ, in the period between 2012 and 2013, considering aspects of methylation in host gene p^{INK4a}.

Methods The cervical smears were submitted to the detection of HPV DNA by Polymerase Chain Reaction (PCR) using primers MY09/11, genotyped with primers for the E6 gene of HPV16, evaluated the methylation of the host p^{INK4a} gene by Nested-MSP technique, and collected epidemiological data, which included socio-demographic and behavioural factors of each patient; and, the data of the diagnostic test that served as reference, the cytopathology.

Results Our results showed nearly 76% of the studied samples presented some degree of gene p^{INK4a} methylated, while 24% were unmethylated. The results showed statistical significance for the correlation of the cytopathology with sexarca ($p=0.05657$), smoking ($p=0.0317$), pregnancies ($p=5938e-05$), parity ($p=0.004425$) and number of partners ($p=0.0242$). The p16 gene methylation correlations that showed statistical significance were pregnancy ($p=0.02725$), parity ($p=0.01414$), and typing ($p=0.008121$).

Conclusion We have found that the presence of HPV16 is associated with a greater chance of methylation of p16 in the lesions. Although, we also observed that the methylation of

p16 gene is increasingly accompanying the severity of lesions, but without statistical relevance.

P3.209 AGE DIFFERENCES BETWEEN HETEROSEXUAL PARTNERS: IMPLICATIONS FOR THE SPREAD OF CHLAMYDIA TRACHOMATIS

¹JH Smid, ¹V Garcia, ²CH Mercer, ¹N Low, ¹CL Althaus. ¹Institute of Social and Preventive Medicine, University of Bern, Bern, Switzerland; ²UCL Research Department of Infection and Population Health, University College London, London, UK

10.1136/sextrans-2017-053264.444

Introduction The consequences of mixing between sexual partners of different ages on the transmission and prevalence of sexually transmitted infections (STI) are still not well understood. Using sexual behaviour data, we obtained a detailed quantitative description of sexual mixing by age. We then investigated the impact of age mixing on the age- and sex-specific prevalence and incidence of *Chlamydia trachomatis* (Ct) using a dynamic transmission model.

Methods First, we used age- and sex-specific data about the proportion of individuals who are sexually active, sexual partner change rates, and the ages of the three most recent partners at first episode of sexual intercourse from the second and third British National Surveys of Sexual Attitudes and Lifestyles (Natsal-2 and Natsal-3). We used a parametric description of the partner ages using skew-normal distributions and combined the data to reconstruct age mixing between heterosexual partners. Second, we incorporated the mixing patterns into a compartmental transmission model to investigate the age groups amongst which Ct is most likely to be transmitted and in which direction.

Results On average, males reported sex with younger female partners (median age difference -5.3; IQR [-1.6, -8.9] years) and females reported having male partners of similar age (median age difference -0.4; IQR [-2.7, 1.9] years). The median and the skewness of partner age distributions depend heavily on the age of the respondent. Ct-transmitting partnerships are typically between an older male and a younger female partner. In 60% of Ct-transmitting partnerships, at least one partner was >25 years old.

Conclusion Our study illustrates the importance of sexual mixing patterns on Ct spread and indicates that a majority of transmitted infections are in age groups outside of those included in typical Ct screening programs. Our method for the incorporating sexual behaviour data into dynamic transmission models can be used to study the transmission of any STI and to understand the potential impact of control strategies that target specific age groups.

P3.210 ESTIMATING THE ANTIBODY PREVALENCE OF HERPES SIMPLEX VIRUS TYPE 2 AMONG SELECT MIDDLE EAST AND NORTH AFRICA POPULATIONS

¹Soha Dargham, ²Gheyath Nasrallah, ²Enas Al-Absi, ²Layla Mohammed, ²Rana Al Disi, ²Mariam Noufal, ¹Laith Abu-Raddad. ¹Weill Cornell Medicine-Qatar, Doha, Qatar; ²Qatar University, Doha, Qatar

10.1136/sextrans-2017-053264.445

Introduction There are very limited data on herpes simplex virus type 2 (HSV-2) infection in the Middle East and North Africa (MENA). We examined the overall and age-specific

HSV-2 antibody prevalence among select MENA populations currently residing in Qatar.

Methods Sera were collected from blood donors attending Hamad Medical Corporation June 2013–2015. Specimens were screened for HSV-2 antibodies using HerpeSelect 2 ELISA IgG kits. All positive and equivocal specimens detecting presence of HSV-2 antibodies were retested for final HSV-2 status using Euroline Westernblot assays. Demographic information included nationality, age, and sex. Age was grouped into 8 bands: ≤24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, and ≥55. Age-specific trend of HSV-2 infection among Egyptian, Fertile Crescent (Iraq, Jordan, Lebanon, Palestine, and Syria) and Qatari nationals was described and assessed using the Cochran–Armitage test.

Results Sera from 2165 blood donors were tested for HSV-2. Among 132 retested specimens, 66 were confirmed positive. Country-specific HSV-2 prevalence was measured at 5.5% (95% confidence interval (CI) 3.7%–8.2%) for Qataris, 4.5% (95%CI 1.9%–10.0%) for Iranians, 4.2% (95%CI 1.8%–9.5%) for Lebanese, 3.1% (95%CI 1.2%–7.7%) for Sudanese, 3.0% (95%CI 1.4%–6.4%) for Palestinians, 2.2% (95%CI 1.1%–4.3%) for Egyptians, 2.0% (95%CI 1.0%–5.0%) for Syrians, 1.0% (95%CI 0.3%–3.6%) for Jordanians, 0.7% (95%CI 0.1%–3.7%) for Yemenis, and 0.5% (95%CI 0.1%–2.8%) for Pakistanis. Age-specific HSV-2 prevalence was estimated for Egyptians, nationals of the Fertile Crescent, and Qataris. Overall, HSV-2 prevalence increased with age, but the trend was not always statistically significant in these populations. HSV-2 prevalence was significantly higher for females at 9.1% (95% CI 4.7%–16.9%) than males at 2.8% (95%CI 2.2%–3.6%) (χ^2 p-value < 0.01).

Conclusion HSV-2 prevalence among MENA nationals was found to be lower than that commonly found in other regions. However, these observed prevalence levels suggest unmet needs for sexual health and control of sexually transmitted infections (STIs) transmission. Programs need to be established to tackle STIs and their disease burden in this region.

P3.211 PROFILE OF MEN WITH HIV+ INFECTION DIAGNOSIS: A COMPARATIVE STUDY ON A PUBLIC HEALTH SERVICE BETWEEN THE YEARS 2003 AND 2013

¹GF Souza, ¹A Almeida, ²HLB Reis, ³HRA Montenegro, ⁴MRL Passos, ⁵DC Ferreira. ¹UNIABEU, Belford Roxo – RJ, Brazil; ²UFES, Vitória – ES, Brazil; ³UFRRJ, Rio de Janeiro – RJ, Brazil; ⁴Prof Titular E Chefe do Setor de DST UFF, Niteroi – RJ, Brazil; ⁵UNESA, UVA, Rio de Janeiro – RJ, Brazil

10.1136/sextrans-2017-053264.446

Introduction To describe and compare the profile of men who had a positive diagnosis to the infection by the Human Immunodeficiency Virus (HIV) at a health service in the municipality of Nova Iguaçu in Baixada Fluminense, Rio de Janeiro, in the years 2003 and 2013.

Methods Comparative and retrospective study in which the patient's medical records were utilised in the referred diagnostic service.

Results In 2003, 772 men were attended, and 116 (15.02%) were diagnosed with HIV, among them, 41 (35.3%) had 1 to 3 years of complete school education, 26 (22.4%) had 4 to 7 years of school education and 26 (22.4%) had from 8 to 11 years. 20 (17.2%) individuals had STDs in the past year. 33 (28.4%) individuals made regular use of condoms and 52 men