

P3.136 **ANTIMICROBIAL SUEPTIBILITY OF *NEISSERIA GONORRHOEAE* ISOLATES IN GRANDE FLORIANÓPOLIS/ BRAZIL, BETWEEN 2008–2016**

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Introduction: *Neisseria gonorrhoeae* (NG), initially highly susceptible to many antimicrobials, was recently assigned as a superbug due to its ability to develop resistance to all antimicrobials introduced for treatment during the last years. This study aimed to determine the prevalence and trends of NG antimicrobial resistance (AMR) during 2008–2016 in Grande Florianópolis, Santa Catarina, Brazil.

Methods A total of 152 gonococcal isolates from urogenital specimens were submitted to Santa Luzia Medical Laboratory, Florianópolis, Brazil. All isolates were identified to the species level using MALDI-TOF. The minimum inhibitory concentration (MIC) was determined using agar dilution method to penicillin, tetracycline, ciprofloxacin, ceftriaxone, cefixime and azithromycin. Quality control was performed using NG WHO reference strains and ATCC 49226.

Results All isolates were sensitive to ceftriaxone (MIC 0.001–0.06 µg/ml) and cefixime (MIC: 0.0005–0.125 µg/ml). Resistance to penicillin, tetracycline, ciprofloxacin and azithromycin were 26.3%, 40.8%, 52.0% and 5.2% respectively.

Conclusion The study showed increased resistance to penicillin, tetracycline, ciprofloxacin and azithromycin. No resistance to ceftriaxone and cefixime was detected. Due to the high level ciprofloxacin resistance, the dual therapy currently recommended in Brazil for gonococcal infections (ciprofloxacin plus azithromycin) is no more an effective treatment option in Grande Florianópolis. Thus, ceftriaxone constitute the treatment option for gonococcal infections, as well as in the states of Rio de Janeiro, São Paulo and Minas Gerais, where regional studies have already detected high level ciprofloxacin resistance. AMR testing needs to be frequently performed to ensure the treatment effectiveness.

P3.137 **HIV HOSPITALIZATIONS: ANALYSIS OF THE INDIVIDUAL AND SOCIAL FACTORS ASSOCIATED IN THE CITY OF RIBEIRÃO PRETO – SP**

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Introduction The present research examined the factors associated to hospital admissions for HIV in Ribeirão Preto - SP. We used the theoretical concept of vulnerability, understood as a set of individual elements (subjective, biological and behavioural), and social elements (adversities of economic and social order) that worsen individuals and/or groups in relation to health issues.

Methods This is an observational epidemiologic study, of case-control type, held in Ribeirão Preto - SP. The study population was made up of the people living with HIV (PLHIV), being called "cases" those who were admitted in 2014 and "controls" those who were followed up at outpatient clinics of the public health system. Interviews were conducted using a specific instrument, containing questions on sociodemographic data, clinical characteristics and other individual and social vulnerabilities. We also collected data from secondary sources, being mainly the clinical record. Data were analysed using descriptive analysis techniques and conditional logistic regression.

Results 168 people living with HIV participated, properly matched in the ratio of 1: 2, so 56 hospitalised PLHIV and 112 not hospitalised PLHIV. Among the risk factors for hospital admission for HIV, we found out that unemployed people and retirees/homemakers had 3.63 and 7.14 times more likely than those who are employed or self-employed; people on the street had 10.18 times more likely to be hospitalised than those who were not on the street; non antiretroviral users had 9.68 times more likely than those under antiretroviral therapy.

Conclusion This research contributed to measure how some characteristics of social and individual vulnerabilities interfere with the intensification of HIV, providing then an unfavourable outcome, as in the case of hospitalisation. This understanding allows us to identify the key population that needs public policies focused on minimising clinical instability of the disease, suffering, pain, and even the costs of hospital services.

P3.138 **MACROLIDE- AND FLUOROQUINOLONE-RESISTANT *MYCOPLASMA GENITALIUM* IN AFRICAN AMERICANS IN ALABAMA**

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Introduction: *Mycoplasma genitalium* (MG) is a sexually transmitted microbe associated with urethritis in men and several inflammatory syndromes in women. Macrolides and fluoroquinolones have been recommended treatments for MG infections. However, resistance of both drug classes is increasing worldwide and treatment failures have been described. There are very little data available on antimicrobial resistance in MG from the USA.

Methods We investigated the prevalence of macrolide- and fluoroquinolone-resistant MG in African American men and women who presented to a Sexually Transmitted Diseases Clinic in Birmingham, Alabama during 2015–2016; most were couples. A real-time PCR assay was validated for detecting MG 23S rRNA mutations known to confer macrolide resistance directly from clinical specimens. Two nested PCRs were used to detect mutations in the quinolone resistant determination regions (QRDRs) in *gyrA* and *parC* genes.

Results Oral, rectal, urine, and/or vaginal specimens from 90 men and 81 women have been tested thus far. A total of 23 MG-positive patients have been identified (4 couples and 15 singles), giving a prevalence rate for MG of 13.5% in this cohort; 11 (12.2%) of men and 12 (14.8%) of women were MG positive. Eleven (47.8%) patients (6 men and 5 women) carried macrolide-resistant MG. Sequencing of the PCR

products indicated that A2071G and A2072G transitions in the 23S rRNA gene was the major mutations. No mutation was found in *gyrA* QRDR. Three patients (13.6%), including 1 couple, carried G248T (S83I) mutation in *parC* QRDR. The female of the couple also carried a *parC* G259C (D87H) mutant group. Two individuals (a couple) carried organisms that had markers for both macrolide and fluoroquinolone resistance.

Conclusion This is the first study based in the USA to document both fluoroquinolone and macrolide resistance in MG using a molecular-based assay. We plan to genotype MG directly from the clinical specimens to investigate the genetic relatedness of antimicrobial-susceptible and resistant-MG, as well as the concordance of MG in couples.

P3.139 ENHANCED SURVEILLANCE OF INFECTIOUS SYPHILIS AND THE CASCADE-OF-CARE AMONG HIV-POSITIVE AND HIV-NEGATIVE MEN WHO HAVE SEX WITH MEN IN BRITISH COLUMBIA, CANADA

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Introduction From 2010 to 2015, the incidence of infectious syphilis (primary, secondary, and early-latent) has increased 5-fold in British Columbia (BC). In response, the BC Centre for Disease Control (BCCDC) enhanced surveillance for syphilis to characterise sexual/social networks driving the epidemic, and to monitor the risk of HIV transmission. Here we communicate indicators developed from the provincial enhanced surveillance system.

Methods In BC, management of syphilis – including partner notification – is centralised, and coordinated by the BCCDC. In January 2016, a new workflow was implemented to systematically collect and analyse data on HIV co-infection, viral load and partners. New indicators were developed along a cascade-of-care framework for case and partner care.

Results From January to September 2016, 581 syphilis cases were diagnosed in BC; 491 (84%) were among men who have sex with men (MSM). Of these, 201 (41%) were HIV-positive and 268 (55%) were HIV-negative. Three-quarters of HIV-positive MSM had undetectable viral loads. 149 (74%) of HIV-positive MSM and 137 (51%) of HIV-negative MSM were diagnosed during the early-latent stage. For both groups, 96% of cases were treated within 30 days of syphilis testing. Of the 201 HIV-positive MSM, 141 (70%) discussed partners with public health nurses and together reported 1270 partners (65% anonymous, 35% notifiable) or 9.0 partners/case (range:0–214). Of the 268 HIV-negative MSM, 215 (80%) discussed partners and reported 1806 partners (51% anonymous, 49% notifiable), or 8.4 partners/case (range:1–200).

Conclusion A greater proportion of HIV-positive MSM were diagnosed with syphilis during the asymptomatic early-latent stage, which may be due to routine syphilis screening. However, a lower proportion of HIV-positive MSM with syphilis co-infection were engaged with public health for partner notification, and report a lower proportion of notifiable partners, compared to MSM with syphilis only. Strategies to engage HIV-positive MSM in partner care would strengthen the public health response to syphilis.

P3.140 HIGH PREVALENCE OF ASYMPTOMATIC SEXUALLY TRANSMITTED INFECTIONS AMONG HIV-INFECTED PREGNANT WOMEN IN SOUTH AFRICA

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Introduction: *Chlamydia trachomatis* (CT), *Neisseria gonorrhoea* (NG) and *Trichomonas vaginalis* (TV) are major contributors to the global burden of disease. During pregnancy, these Sexually Transmitted Infections (STIs) may lead to complications including intrauterine death and preterm delivery, and may facilitate mother-to-child-transmission (MTCT) of HIV. Treatment of these infections is suboptimal due to the syndromic approach to diagnosis and management. We conducted an analysis to determine the prevalence of CT, NG and TV among HIV infected pregnant women and prevalence of symptoms among those infected.

Methods HIV-infected pregnant women accessing antenatal care (ANC) services for the first time for their current pregnancy were invited to take part in the study. Participants were interviewed using a questionnaire and asked to self-collect two vaginal swab specimens to test for CT, NG and TV. Tests were done by nurses in the clinic using the Xpert CT/NG and Xpert TV [Cepheid, Sunnyvale, CA].

Results Overall 192 women were tested for CT, NG and TV, of whom 52.1% (100/192) were had at least one infection. CT had the highest prevalence (40.6%), followed by TV (26.6%), while NG had the lowest prevalence (7.3%). Based on self-reported symptoms, 78% of infected individuals were asymptomatic; 68% were asymptomatic when using clinician-observed symptoms. Using a combination of both, 58% were asymptomatic. Individuals infected with NG were most likely to be symptomatic (73.3%), followed by TV (51.9%), then CT (43.1%) using self-report and clinician observation.

Conclusion This analysis shows that HIV-infected pregnant women have a high burden of three curable STIs that are associated with adverse pregnancy outcomes and may have links to HIV MTCT. Most infected women were asymptomatic when using either symptom self-reporting or clinician observation or a combination of both, highlighting the limitations of the symptoms-based approach to STI diagnosis. Therefore, the use of definitive POC tests for routine STI screening must be considered in this setting.

P3.141 CHLAMYDIA TRACHOMATIS, NEISSERIA GONORRHOEAE AND TRICHOMONAS VAGINALIS COLONISATION AMONG HIV-EXPOSED NEONATES IN SOUTH AFRICA

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Introduction Sexually transmitted infections (STIs) such as *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (NG) and *Trichomonas vaginalis* (TV) are associated with adverse