

groups, respectively: 8 (4–31) vs. 1.5 (1–5) cells/mm<sup>3</sup>; 87% (77–94) vs. 83% (68–92) lymphocytes and 8% (4–12) vs. 15% (6–27) monocytes/mm<sup>3</sup>; protein 47 (35–69) vs. 35 (30–38) mg/dL; and glucose 52 (43–63) vs. 58 (53–66) mg/dL. 31% of patients had a reactive VDRL in CSF. HIV+ were shown to be of younger age ( $p=0.003$ ) and to present significantly higher CSF cell counts ( $p=0.002$ ) and protein ( $p=0.008$ ).

**Conclusion** In our cohort most patients were HIV+, who developed the disease at an earlier age. CSF parameters showed significantly different cell counts and protein concentrations among HIV+. CSF VDRL presented a low sensitivity in both groups, with no significant difference between them. HIV+ patients were asymptomatic in more than half of cases

### P3.242 FACTORS ASSOCIATED WITH VAGINAL PROSTATE-SPECIFIC ANTIGEN DETECTION AND SELF-REPORTED UNPROTECTED SEX IN A CLINICAL TRIAL IN MALAWI

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**Introduction** Vaginal prostate-specific antigen (PSA) is a biomarker of recent semen exposure that may overcome potential fallacies of self-reported sexual behaviours, improving sexual exposure assessment in HIV/STI research.

**Methods** We conducted a cohort study to compare PSA detection and self-reported unprotected sex using data from a clinical trial in Malawi that randomised 73 HIV-infected and 24 HIV-uninfected women to depot medroxyprogesterone acetate injectable or levonorgestrel implant. Women were advised to abstain from vaginal intercourse or use a condom the day preceding study visits. We tested 539 vaginal swabs from 97 women for PSA using the ABACard p30 rapid strip test (Abacus Diagnostics, Inc., West Hills, CA). Self-reported sexual behaviours and vaginal swabs were collected at six study visits. Log-binomial regression with generalised estimating equations were used to estimate associations of PSA detection and reported unprotected sex with demographic and behavioural factors, adjusting for study arm and pre- vs. post-contraception initiation.

**Results** Overall, 55 (57%) women tested positive for PSA and 54 (56%) women reported unprotected sex. Among PSA-positive samples, 62% (65/105) of instances reported no unprotected sex. The following were associated with PSA detection: HIV-negative status (Prevalence Ratio (PR): 1.69, 95% Confidence Interval (CI): 1.09, 2.61), younger age (PR: 1.04, CI: 1.00, 1.08), reported unprotected sex (PR: 2.48, CI: 1.70, 3.60), and sex within past 48 hours (PR: 4.68, CI: 3.00, 7.30). The same factors were significantly associated with self-reported unprotected sex, as was PSA detection (PR: 2.45, CI: 1.7, 3.53).

**Conclusions** Self-reported sexual behaviours were significantly associated with PSA detection. However, PSA was detected among women reporting no unprotected sex, suggesting misreporting of condom use or condom failure. HIV-negative status and younger age were associated with unprotected sex, suggesting more frequent biases in research data for these groups based on social desirability and non-adherence to protocols.

### P3.243 NEISSERIA GONORRHOEAE ANTIMICROBIAL SUSCEPTIBILITIES SURVEILLANCE IN CHINA

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**Introduction** Gonococcal infections have been a major sexually transmitted disease (STD) since 1980s and also a serious public health problem in China. A national surveillance report showed that the number of reported gonorrhoea cases were 1 00 245 in 2015. Resistant gonococcal infections are the obstacle in control work of the disease, which not only affect the treatment as well as the development of complications, but also facilitate the further transmission. The WHO has been drafted a global action plan to control the spread and impact of antimicrobial resistance in *Neisseria Gonorrhoeae*. This report will to analysis the susceptibility trends of NG to ciprofloxacin, spectinomycin, and ceftriaxone from 2005 to 2013 in China including PPNG and TRNG rate.

**Methods** The production of  $\beta$ -lactamase was determined by paper acidometric testing method. Antimicrobial susceptibility testing was performed for tetracycline, ciprofloxacin, spectinomycin, and ceftriaxone using the agar dilution method. Establishment of quality control standards and system, which provide regular examination of participant laboratories through sending quality control strains, as well as through field supervision in China.

**Results** About 11625 NG isolates were collected from patients with uncomplicated gonorrhoea in 2005–2013. A total of 4565 (39.27%) PPNG were and 4807 (41.21%) TRNG were identified, with an increase from 28.09% in 2005 to 39.15% in 2013. A total of 11 178 (96.16%) ciprofloxacin-resistant strains were identified and the rate of ciprofloxacin-resistant strains keep stable from 2005 to 2013. All of isolates were susceptible to spectinomycin and ceftriaxone from 2005–2013, but a total of 4325 (36.79) ceftriaxone-intermediate strains were identified.

**Conclusion** Antimicrobial susceptibility of NG isolated in China from 2005 to 2013 was characterised by high rate of PPNG, TRNG, and ciprofloxacin -resistant strains. Results of the study illustrate that spectinomycin and ceftriaxone can be considered as the choice drugs for empirical treatment of infection in China.

### P3.244 GENETIC CHARACTERISTICS AND MOLECULAR MECHANISMS OF RESISTANCE OF AZITHROMYCIN-RESISTANT NEISSERIA GONORRHOEAE ISOLATED IN SHENZHEN, CHINA DURING 2011–2015

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**Introduction** Most current guidelines now recommend Azithromycin (AZM) as a component of dual therapy for gonorrhoea in combination with third-generation cephalosporins. Here we investigated the prevalence, molecular mechanisms and genetic characteristics of azithromycin-resistant (AZM-R) *N.gonorrhoeae* isolates in Shenzhen area from 2011 to 2015.

**Methods** A total of 788 *N. gonorrhoeae* isolates were collected. The agar dilution method and E-test were used to