## 00360 Antimicrobial Susceptibility Patterns of Neisseria Gonorrhoeae Isolates From Female Patients in KK Women's and Children's Hospital From May 2012 to December 2017

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**Aims:** Neisseria gonorrhoeae is a facultatively intracellular gram-negative diplococcus and is the etiological agent of a sexually-transmitted disease, gonorrhoea. N. gonorrhoeae can cause multiple manifestations in females. In addition, neonates exposed during birth from the gonorrhoea-infected mother may result in gonococcal ophthalmia neonatorum. The recommended treatment for genital gonorrhoea infection is a dual therapy consisting of ceftriaxone or cefixime, plus azithromycin. However, there have been an increasing number of resistant strains of N. gonorrhoeae, rendering the treatment ineffective. In this study, the antibiotic susceptibility patterns of the N. gonorrhoeae isolates were investigated.

**Methodology:** Genital swabs were plated on the selective Thayer-Martin agar, and incubated in a $CO_2$ condition for up to 72 hours. Antibiotic susceptibility testing was by disc diffusion using the Calibrated Dichotomous Susceptibility (CDS) method on Chocolate Columbia blood agar. Antibiotics tested were ceftriaxone, penicillin, azithromycin and ciprofloxacin. Antibiotic susceptibility results were based on the annular radii of the antibiotic discs.

**Result:** Seventy-two N. gonorrhoeae isolates were obtained from 7920 genital swabs sampled (0.9%). Sixty-one of 72 isolates were fully susceptible to ceftriaxone, 11 showed decreased susceptibility. Two isolates (2.8%) were resistant to azithromycin. Three isolates were found to be fully susceptible to penicillin, while 23 isolates were less susceptible and 46 isolates were resistant. Lastly, 6 isolates (9.7%) were fully susceptible to ciprofloxacin.

**Conclusion:** The local strains showed high prevalence of susceptibility to ceftriaxone and azithromycin, but from elsewhere, there are reports of increasing resistance towards the extended-spectrum cephalosporins and azithromycin in treating gonorrhoea. Hence, periodic assessment of the prevalence of antibiotic resistance will be useful in evaluating the relevance of the dual-therapy treatment.