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Reference:

Kirkcaldy, R et al; *Neisseria gonorrhoeae* Antimicrobial Resistance Among Men Who Have Sex With Men and Men Who Have Sex Exclusively With Women: The Gonococcal Isolate Surveillance Project, 2005-2010; Annals of Internal Medicine, March 2013

Introduction:

Gonorrhea is the second most commonly reported notifiable infection in the US. It is associated with significant complications and morbidity. Since treatment with antibiotics began in the 1930's gonorrhea has rapidly developed resistance to most therapies. Third generation cephalosporins and azithromycin are the only remaining class of antibiotics given recommendation. This was a study to determine the minimum inhibitory concentrations (MICs) of current treatment regimen in MSM and MSW.

Methods:

Cumulation of 6 years of surveillance data from the Gonococcal Isolate Surveillance Project (GISP). GISP is national sentinel surveillance system that includes STD clinics in 30 US cities.

Participants:

First 25 patients diagnosed with positive urethral culture each month were tested for susceptibility. Years of surveillance were 2005-2010. Epidemiologic data on participants was de-identified prior to submission.

Resistance Criteria

Increasing MICs are predictors of resistance. Cutoffs (micrograms/mL) for the study are as follows: ceftriaxone (0.125 or greater), cefixime (0.25 or greater), and azithromycin (2.0 or greater)

Results

34,600 results collected, 8117 were MSM (23.5%) and 26,483 were MSW(76.5%). Resistance was shown as follows:

Antibiotic	Resistance (MICs > cutoff)		
	All Men (n=34,600)	MSM (n=8117)	MSW (n=26,483)
Azithromycin	123 (0.4%)	73 (0.9%)	50 (0.2%)
Cefixime	133 (0.6%)	98(1.7%)	35 (0.2%)
Ceftriaxone	57 (0.2%)	29 (0.4%)	28 (0.1%)

Discussion

There were some limitations as the study did not look at any cases diagnosed in clinical settings other than public std clinics. It is unclear how this would have affected the overall data. Also, the listed MIC cutoffs do not necessarily denote resistance but increasing MICs were considered a precursor to resistance. The MIC cutoffs were intentionally set lower to capture all possible cases of possible resistance, which could falsely elevate the number of reported resistant cases. Overall it was a decent study showing MSM remain a vulnerable group to antibiotic resistant gonorrhea isolates and the study recommends continued monitoring for possible treatment failures in this group
