

Background

- *Mycoplasma genitalium* (*M gen*) is a small, intracellular pathogen associated with urethritis and pelvic inflammatory disease.
- It is not a notifiable disease in Ireland & its role as a sexually transmitted infection is not fully understood.
- True prevalence of this infection in Ireland is uncertain.
- One prevalence study in Ireland reported a rate of 3% prevalence in MSM, with macrolide resistance detected in 75% and fluoroquinolone resistance detected in 33% of positive samples respectively.

Case

- A 25 year old man, attending the PrEP service, presented with recurrent episodes of symptomatic urethritis.
- Negative C trachomatis (CT) and N gonorrhoea (GC) nucleic acid amplification test (NAAT).
- Diagnosed with *M genitalium* on PCR with evidence of macrolide resistance.
- Treated with moxifloxacin 400mg OD for 10 days.
- Symptoms recurred and treated with repeat moxifloxacin at another service.
- Symptoms initially responded then disimproved.
- On review, NAATs were negative for CT and GC, positive for *M genitalium* and demonstrated detection of 23SrRNA and parC genes, associated with macrolide and fluoroquinolone resistance respectively.
- GyrA is routinely tested for surveillance purposes but not reported due to lack of association with treatment failure.
- As per international guidelines, a course of doxycycline 100mg BD for 7 days followed by pristinamycin 1g QID PO for 10 days

Notable resistance

<u>Antibiotic</u>	<u>Region</u>	<u>Implication if detected</u>
Macrolide	Region V of 23S rRNA gene	Consider Moxifloxacin
Fluoroquinolone	QDRS of gyrA gene	Unclear evidence between mutations and clinical resistance
Fluoroquinolone	QDRS of parC gene	Consider referral / Pristinamycin

Discussion

- In the limited data available it appears that increasing drug resistance is common in *Mycoplasma genitalium* infections.
- Given the safety profile of fluoroquinolones, resistance to moxifloxacin should be considered when patients fail therapy. There is currently no availability for the detection of resistance within Ireland.
- Notification and the development of resistance testing within Ireland would support a better understanding of the epidemiology of this infection.