

A Case of Multi-Drug Resistance *Mycoplasma Genitalium*, Implications and Discussion Reynolds, B; O'Dea, S, Flood, G, Soliman, C; Martin, L; O'Connor, R; O'Broin, C Infectious Diseases Department



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 fluroquinolone resistance detected in 33% of positive samples respectively.

<u>Case</u>

- 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>	Implication if detected
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.

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- 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.

Pinto-Sander, N. and Soni, S., 2019. <i>Mycoplasma genitalium</i>infection. BMJ, p.15820.

Mulligan, V., Lynagh, Y., Clarke, S., Unemo, M. and Crowley, B., 2019. Prevalence, Macrolide Resistance, and Fluoroquinolone Resistance in Mycoplasma genitalium in Men Who Have Sex With Men Attending an Sexually Transmitted Disease Clinic in Dublin, Ireland in 2017–2018. Sexually Transmitted Diseases, 46(4), pp.e35-e37.

Sexualwellbeing.ie. 2022. Guidance on Mycoplasma genitalium testing and management in Ireland, January 2020. [online] Available at: <https://www.sexualwellbeing.ie/for-professionals/research/research-reports/irish-guidance-on-m-gen-testing-and-management-january-2020.pdf> [Accessed 12 May 2022].