

A case of multi-drug resistant *Mycoplasma Genitalium* and the current therapeutic challenges

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Acknowledgements :

- Dr Catriona Bradshaw

Disclosures:

- I am not aware of any actual or perceived conflict of interest.

Introduction:

- A 35 year old heterosexual male presented to Melbourne Sexual Health Centre with dysuria.
- Treated empirically with doxycycline 100mg BD 7/7 for non-gonococcal urethritis.
- A first pass urine for *M. genitalium* and macrolide resistance PCR was positive.
- Despite treatment with all currently available antimicrobial options, he remained symptomatic and subsequent tests of cure were positive.

Date	Treatment	Test of cure
10/1/19	Pristinamycin 100mg QID 7/7 *versus moxifloxacin due to PMH palpitations *cure rate 75% of macrolide resistant infections	1/2/19 – Mg detected
12/2/19	Minocycline 100mg BD 14/7 *lower MICs than doxycycline *4 case reports of cure	12/3/19 – Mg detected
19/3/19	Sitafloxacin + Doxycycline 100mg BD 7/7 ECG NSR, QTc within normal limits *lower MICs and higher cure rates than moxifloxacin	16/4/19 – Mg detected
16/8/19	Consideration of spectinomycin Now asymptomatic	Mg PCR negative!

CONCLUSIONS:

- Difficulties treating this infection particularly owing to increasing rates of antimicrobial resistance and side effect profiles of currently available drugs
- Use of resistance guided therapy and maintaining a high index of suspicion for treatment failure
- The imperative to develop novel and inventive treatment strategies including combinations of existing drugs

References:

Read T, Jensen JS, Fairley CK, Grant M, Danielewski JA, Su J, et al. Use of Pristinamycin for Macrolide-Resistant Mycoplasma genitalium Infection. *Emerg Infect Dis*. 2018;24(2):328-335. <https://dx.doi.org/10.3201/eid2402.170902>

[Glaser AM](#), [Geisler WM](#), [Ratliff AE](#), [Xiao L](#), [Waites KB](#), [Gaisa M](#). *Int J STD & AIDS*. Two cases of multidrug resistant genitourinary Mycoplasma genitalium infection successfully eradicated with minocycline. 2019 Apr;30(5):512-514. doi: 10.1177/0956462418816757. Epub 2019 Jan 10.

[Deguchi T](#), [Ito S](#), [Yasuda M](#), [Kondo H](#), [Yamada Y](#), [Nakane K](#), [Mizutani K](#), [Tsuchiya T](#), [Yokoi S](#), [Nakano M](#). Emergence of Mycoplasma genitalium with clinically significant fluoroquinolone resistance conferred by amino acid changes both in GyrA and ParC in Japan. *J Infect Chemother*. 2017 Sep;23(9):648-650. doi: 10.1016/j.jiac.2017.03.008. Epub 2017 Apr 24.

[Read TRH](#), [Fairley CK](#), [Murray GL](#), [Jensen JS](#), [Danielewski J](#), [Worthington K](#), [Doyle M](#), [Mokany E](#), [Tan L](#), [Chow EPF](#), [Garland SM](#), [Bradshaw CS](#). *Clin Infect Dis*. Outcomes of Resistance-guided Sequential Treatment of Mycoplasma genitalium Infections: A Prospective Evaluation. 2019 Feb 1;68(4):554-560. doi: 10.1093/cid/ciy477.

[Read TRH](#), [Murray GL](#), [Danielewski JA](#), [Fairley CK](#), [Doyle M](#), [Worthington K](#), [Su J](#), [Mokany E](#), [Tan LT](#), [Lee D](#), [Vodstrcil LA](#), [Chow EPF](#), [Garland SM](#), [Chen MY](#), [Bradshaw CS](#). Symptoms, Sites, and Significance of Mycoplasma genitalium in Men Who Have Sex with Men. *Emerg Infect Dis*. 2019 Apr;25(4):719-727. doi: 10.3201/eid2504.181258.

Li Y, Le WJ, Li S, Cao YP, Su XH. Meta-analysis of the efficacy of moxifloxacin in treating Mycoplasma genitalium infection. *Int J STD AIDS*. 2017 Oct;28(11):1106-1114. doi: 10.1177/0956462416688562.

[Cina M](#), [Baumann L](#), [Egli-Gany D](#), [Halbeisen FS](#), [Ali H](#), [Scott P](#), [Low N](#). Mycoplasma genitalium incidence, persistence, concordance between partners and progression: systematic review and meta-analysis. *Sex Transm Infect*. 2019 Aug;95(5):328-335. doi: 10.1136/sextrans-2018-053823. Epub 2019 May 4.

Romano SS, Jensen JS, Lowens MS, Morgan JL, Chambers LC, Robinson TS, Totten PA, Soge OO, Golden MR, Manhart LE. *Long Duration of Asymptomatic Mycoplasma genitalium Infection After Syndromic Treatment for Nongonococcal Urethritis*. *Clin Infect Dis*. 2019 Jun 18;69(1):113-120. doi: 10.1093/cid/ciy843