Non-quinolone options for the treatment of Mycoplasma genitalium in the era of increased resistance

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Background:
Mycoplasma genitalium (MG) is becoming increasingly difficult to treat with recommended antimicrobials. Macrolide resistance exceeds 50% in many regions and quinolone resistance is as high as 20% in the Asia-Pacific. In addition, there are growing concerns regarding the safety profile of fluoroquinolones. As such, non-quinolone alternatives are needed for the treatment of MG. We report the efficacy and tolerability of two series; doxycycline+pristinamycin and minocycline, to provide more precision around proportion cured and adverse effects to assist clinicians making management decisions with complex cases.

Methods:
We conducted a prospective evaluation of patients with macrolide-resistant MG who were treated with; i) pristinamycin 1g three times daily in combination with doxycycline 100mg twice daily for 10 days (pristinamycin+doxycycline) between September 2018 and December 2019; OR ii) minocycline 100mg twice daily for 14 days between May 2018 and February 2020, at Melbourne Sexual Health Centre.

Results:
Of the 73 patients treated with pristinamycin+doxycycline 55 were cured (75% [95%CI:64%-85%]). Of the 35 patients treated with minocycline 25 were cured (71% [95%CI:54%-85%]). 38(59%) of pristinamycin+doxycycline cases and 15(46%) of minocycline cases reported mild side effects.

Conclusion:
Macrolide and fluoroquinolone failure and contraindications and/or concerns about fluoroquinolones are becoming increasingly common, and alternative licensed agents with known safety profiles are needed for MG.

Our data provide the first published estimates for minocycline cure in a series of 35 patients and indicates 71% of individuals with macrolide-resistant MG will be cured with 14 days. Our pristinamycin+doxycycline series indicates that 75% of macrolide-resistant MG infections will be cured with this regimen.

Both of these regimens appear to have relatively similar efficacy, and while adverse effects were common with both regimens, they were mild and tolerable.

Overall, these data provide useful efficacy estimates and tolerability data for clinicians when considering non-quinolone treatment regimens for macrolide-resistant MG infections.

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