Guidance on *Mycoplasma genitalium* testing and management in Ireland, January 2020

Introduction and Background

Mycoplasma genitalium is an emerging STI. The pathophysiology is incompletely understood but it has been implicated in urethritis, epididymorchitis and proctitis in males and pelvic inflammatory disease (PID) in females. The prevalence of infection with *Mycoplasma genitalium (M gen)* in Ireland is unknown. Antimicrobial resistance is a particular challenge with this organism, highlighting the need for prudent and judicious use of testing and antimicrobial agents.

In response to concerns around the absence of national guidance on testing and management in Ireland and concerns relating to variation in how individuals are being managed a small group developed a short life working group[i] tasked with developing evidence informed guidance on testing and management of *M gen* in Ireland. The recently published BASHH guidelines[1] were used with additional local information where available. Prior to publication of this final version on the HSE Sexual Health and Crisis Pregnancy Programme website, this document was subject to review and comment by relevant professional bodies through a consultation process.

M gen is not currently a notifiable infection. Given the particular challenge relating to antimicrobial resistance with this organism, it is the view of the working group that steps should be taken to making *M gen* a notifiable infection. In that regard the chair of the working group has made representation to the Health Protection Surveillance Centre.

Publication Date: January 2020

Review Date: This guidance will be reviewed 2 years following publication with interim reviews as required in the intervening time period. The SHCPP will ask the working group, via the Chair, Dr. Fiona Lyons, to reconvene when this guidance is due for review.

Recommendations	**Comment**
1. Who to test?	
All patients presenting with symptoms and signs of PID[2]	In line with current BASHH guidelines
All patients presenting with symptoms and signs of urethritis who are CTNG[3] negative and have failed to respond to 1/52 doxycycline	BASHH currently recommends testing of all with symptoms and signs of urethritis, though it is known that M gen testing is not available in many sites. The current recommendation in Ireland will be kept under review.
All patients presenting with sexually acquired epididymorchitis	In line with current BASHH guidelines (consider)
Patients presenting with proctitis where other common causes have been excluded	It is recommended that this is done in the specialist STI setting. Routine rectal testing of patients presenting with proctitis is not currently recommended.
Current sexual partners (regular and non-regular partners where there is likely to be further sexual contact) of those who are *M gen* positive. It is reasonable to wait for the result in the contact before treating with clear advice on abstaining from unprotected sexual contact during that time.	In line with current BASHH guidelines

[1] BASHH, British Association for Sexual Health and HIV national guideline for the management of infection with Mycoplasma genitalium (2018), https://www.bashhguidelines.org/media/1198/mg-2018.pdf
[2] Pelvic Inflammatory disease
[3] CTNG, *Chlamydia trachomatis Neisseria gonorrhoea*

Testing of asymptomatic individuals is **not currently recommended** (unless they are current sexual contact of a known positive individual)	In line with current BASHH guidelines
2. How and where to test?	
It is recommended that all *M gen* testing is done using accredited tests.	The NVRL currently uses the Hologic platform The turnaround time for testing at the NVRL is 5 working days
It is recommended that resistance testing is performed on all positive samples.	The NVRL commenced resistance testing in January 2020. The turnaround time for resistance testing at the NVRL is 7-10 working days from initial sampling.
In males with urethritis and/or epididymorchitis, the sample of choice is a first void urine	In line with current BASHH guidelines
In patients with proctitis where *M gen* infection is considered likely, the sample of choice is a rectal swab	Rectal testing in asymptomatic individuals is **not currently recommended**.
In females the sample of choice is a vaginal swab (provider or self-taken)	In line with current BASHH guidelines
Pharyngeal testing is **not** currently recommended	
3. Management of positive results	
Where to see patients?	
It is recommended that all patients testing positive for *M gen* are referred to an STI clinic for management	
Antibiotic recommendations	
Non-specific urethritis (where CTNG and *M gen* status are unknown) ➢ Doxycycline 100mg BD x 1/52 orally ➢ Where it is not possible to use doxycycline, azithromycin 1g stat orally followed by 500mg orally once daily for 2 days	**Single dose azithromycin for treatment of non-specific urethritis (where CTNG and mycoplasma status are unknown) is NOT recommended.**
Positive *M gen:* resistance is not known or isolate known to be macrolide sensitive ➢ Doxycycline 100mg twice daily for 7 days followed by azithromycin 1g orally as a single dose then 500mg orally once daily for 2 days ➢ Where it is not possible to use doxycycline, azithromycin 1g stat orally followed by 500mg orally once daily for 2 days	A recent Irish study from the Gay Men's Health Service in collaboration with the Virology Department at St James's Hospital[4] found evidence of macrolide resistance in 75% of isolates. A review of M gen testing over the first year of testing at the NVRL found evidence of macrolide resistance in first presentation samples in 65% and 42% of males and females respectively.[5] **Use of single dose macrolide monotherapy is NOT recommended.**
Positive *M gen:* macrolide resistant, quinolone sensitive ➢ Moxifloxacin 400mg orally once daily x 10 days for uncomplicated infection and x 14 days for *M gen* related PID and epididymorchitis	Fluoroquinolones are associated with prolonged, disabling and potentially irreversible adverse reactions. This risk is greater in older patients, those with renal impairment and in those on concomitant corticosteroids therapy. The risk of QT prolongation is greater with moxifloxacin than other quinolones. All patients should

[4] 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. Mulligan V et al. Sex Transm Dis. 2019 Apr;46(4):e35-e37

[5] Personal communication Dr. Cillian de Gascun, Director National Virus Reference Laboratory

	be assessed for other medication or conditions that may prolong the QT interval. These risks should be discussed with all patients and they should be provided with written information.[6]
Positive *M gen*: macrolide and quinolone resistance suspected or known ➢ Pristinamycin or Sitofloxacin are treatment options in these circumstances. Doxycycline can reduce bacterial burden in advance of using these medicines which need to be imported.	Such cases may call for collaboration with international colleagues. **Should only be done in a service with experience and expertise in managing *M gen* resistant cases.**
Pregnancy Data on *M. gen* and its association with adverse pregnancy outcomes are limited, however it has been associated with a small increased risk of preterm delivery and spontaneous abortion. Azithromycin use during pregnancy is unlikely to increase the risk of birth defects or adverse pregnancy outcomes. A three-day course of azithromycin (1g, 500mg, 500mg) can be used for uncomplicated *M. gen* infection detected in pregnancy where the isolate is known to be macrolide sensitive. The use of moxifloxacin in pregnancy is **contra-indicated**. In women with likely macrolide resistance, or with upper genital tract infection in pregnancy, options are limited. Although doxycycline is considered safe for use in the first trimester by the FDA, the BNF advises against its use in all trimesters. There are no data regarding the use of pristinamycin in pregnancy. An informed discussion should be had with the pregnant woman around the risks associated with the use of these medicines in pregnancy and the risks of adverse outcomes associated with *M. gen* infection, and where possible treatment should be delayed until after pregnancy, guided by resistance results.	In line with current BASHH guidelines
Test of Cure	
All patients should attend for a **test-of-cure five weeks** (and no sooner than three weeks) after the start of treatment to ensure microbiological cure	
Management of contacts	
Current sexual partners (regular and non-regular partners where there is likely to be further sexual contact) of those who are *M gen* positive should be offered testing for *M gen*.	
Current sexual partners (regular and non-regular partners where there is likely to be further sexual contact) of those who are *M gen* positive should, where possible, be offered the same treatment as their partner and guided by partner resistance results. It is reasonable to wait for the result (including resistance result) in the contact before treating with clear advice on abstaining	

[6] http://www.hpra.ie/docs/default-source/publications-forms/newsletters/hpra-drug-safety-newsletter-edition-91.pdf?sfvrsn=7

from unprotected sexual contact during that time.	
4. Surveillance	
M gen is not currently a notifiable infection. This may change in the future. In the meantime, it is recommended that laboratories and STI services monitor the number of tests, positive results and patient outcomes in line with local audit practices.	

[i] Membership of working group

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