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CPG C3

CLINICAL MANAGEMENT OF UNCOMPLICATED MYCOPLASMA GENITALIUM

GUIDELINE STATUS: FINAL 19/05/2008

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AUTHOR: MR BUSH, DM LEE

SCOPE OF PRACTICE

TARGET POPULATION

- Clients with a presumptive clinical diagnosis of uncomplicated *Mycoplasma genitalium* (MG) from clinical presentation and clinical examination.
- Clients with confirmed uncomplicated MG
- Clients who present as a contact of MG

EXCLUSION CRITERIA

- Clients with complications of infection including symptoms of Pelvic Inflammatory Disease and epididymitis
- Clients who are pregnant or breast feeding
- Clients with ongoing symptoms post treatment
- Clients who are HIV positive

GUIDELINE OBJECTIVES AND ANTICIPATED OUTCOMES

- Provide treatment for clients with a confirmed diagnosed infection or presumptive treatment for symptomatic clients
- Identification of individual STI risk and provision of appropriate screening
- Identify public health risks to control infections by:
 - Provision of STI education and information
 - Identification and exploration of sexual risk taking behaviours
 - Partner notification and treatment
 - Test of reinfection/test of cure where appropriate
 - Monitoring antimicrobial resistance

BACKGROUND

CONDITION DESCRIPTION

Mycoplasma genitalium (MG) is a free living aerobic bacterium without a cell wall, which is sensitive to antibiotics of the macrolide group and to tetracyclines^{1,2}. MG is sexually transmitted and infects the mucous membranes of the urethra, cervix, throat and anus^{2,3,4}. Studies have shown MG is able to attach and enter to genital tract epithelial cells leading to an inflammatory response.⁵ MG has also the potential to attach to spermatozoa providing a mechanism for spread to the female upper genital tract^{1,5}

MG is thought to be a cause of male non-gonococcal urethritis (NGU) which often presents as a penile discharge and dysuria.⁶ In women, MG may cause urethritis, cervicitis, pelvic inflammatory disease (PID) and tubal factor infertility.⁵

Although MG has potential to cause significant inflammation at the site of infection, MG may remain asymptomatic.^{7,8} MG DNA has been found in urethra of males with epididymitis and in prostatic tissue of males with prostatitis^{5,6,7}. It has also been detected in the endometrium of women with pelvic inflammatory disease.^{7,8}

SITE	MEN	WOMEN
Urethral	<ul style="list-style-type: none"> • Dysuria and or • Discharge or • Asymptomatic 	<ul style="list-style-type: none"> • Dysuria and or • Discharge or • Asymptomatic
Rectum	<ul style="list-style-type: none"> • Proctitis or • Asymptomatic 	<ul style="list-style-type: none"> • Proctitis or • Asymptomatic
Pharyngeal	<ul style="list-style-type: none"> • Asymptomatic 	<ul style="list-style-type: none"> • Asymptomatic
Cervix		<ul style="list-style-type: none"> • Cervicitis or • Asymptomatic

Table C3.1: MG infection in men and women ^{1,5}

EPIDEMIOLOGY

MG is not a notifiable infection in Australia. ⁹ The role of population screening for MG infection in asymptomatic men and women has not been established. Currently testing is only recommended for patients presenting with symptoms. ^{7,8,9}

INVESTIGATIONS AND DIAGNOSIS

No commercially available test has been released for diagnostic purposes for the detection of MG. ¹⁰ Nucleic acid amplification tests (NAATs) are the only available diagnostic tools. First pass urine (FPU) was found to be the most sensitive diagnostic specimen for MG, but for optimal sensitivity, it should be supplemented with a cervical specimen in women. ^{7,8,10}

MICROSCOPY ^{5,7,8,9,10}

- Urethral Gram stain: Male urethral exudate >5 Polymorphonuclear leukocytes (PMN's) /oif in the absence of GNDC may have predictive value ³ In men with MG the urethral Gram stain may show evidence of urethritis (>5 polymorphs per high powered field) however this may not always be present
- Cervical Gram stain: elevated PMN's levels in the absence of GNDC may also have predictive value

WOMEN ^{5,7,8,9,10}

- Women presenting with genital symptoms such as vaginal discharge, dysuria, intermenstrual bleeding or pelvic pain is warranted given the association between MG and cervicitis, PID and endometritis

MEN ^{5,7,8,9,10}

- Men presenting with discharge, dysuria and urethral irritation require MG testing. Testing men who are experiencing epididymitis or prostatitis may also be warranted.

MEN	WOMEN	CONTACTS
PCR <ul style="list-style-type: none"> • First Pass Urine or • Urethral swab 	PCR <ul style="list-style-type: none"> • First Pass Urine and or • Cervical swab 	PCR <ul style="list-style-type: none"> • First pass urine • If MSM; anal and throat swabs

Table C3.2: Investigations for MG ^{11,12}

TREATMENT AND MANAGEMENT

TREATMENT INDICATORS

- Clinical diagnosis based on examination findings
- Laboratory confirmed diagnosis
- Contact of sexual partners who are positive for Mycoplasma Genitalium

FIRST LINE THERAPY ^{11,12}

A single dose of Azithromycin appears to be effective in the treatment of MG, Azithromycin has been observed to eradicate 85% of MG infections, and however resistant strains have been documented, particularly where there has been a sexual contact overseas.

TREATMENT

- **Azithromycin 1gm single dose**

- A test of cure is recommended at one month post treatment.
- If treatment failure occurs, exclude reinfection from an untreated partner. Retreat with 1gm of Azithromycin and complete a one month Test of cure.

SECOND LINE THERAPY ^{11,12}

If reinfection has been excluded and the client has a positive test of cure then treatment with Moxifloxacin is recommended. 20% of MG positive (one in five) have a strain of MG that is resistant to Azithromycin.

2ND LINE TREATMENT

- **Moxifloxacin 400mg daily for 10 days**

MANAGEMENT ^{11,12}

- 10% of clients may experience mild gastric side effects from Azithromycin. ^{9,13}
- If the MG test is positive at test of cure, exclude reinfection from an untreated partner
- If reinfection likely then retreat partner and patient with Azithromycin at same time and advise refrain from sexual contact for 7 days
- Test of cure is required one month after re-treatment
- Women with symptoms suggesting PID require MO review

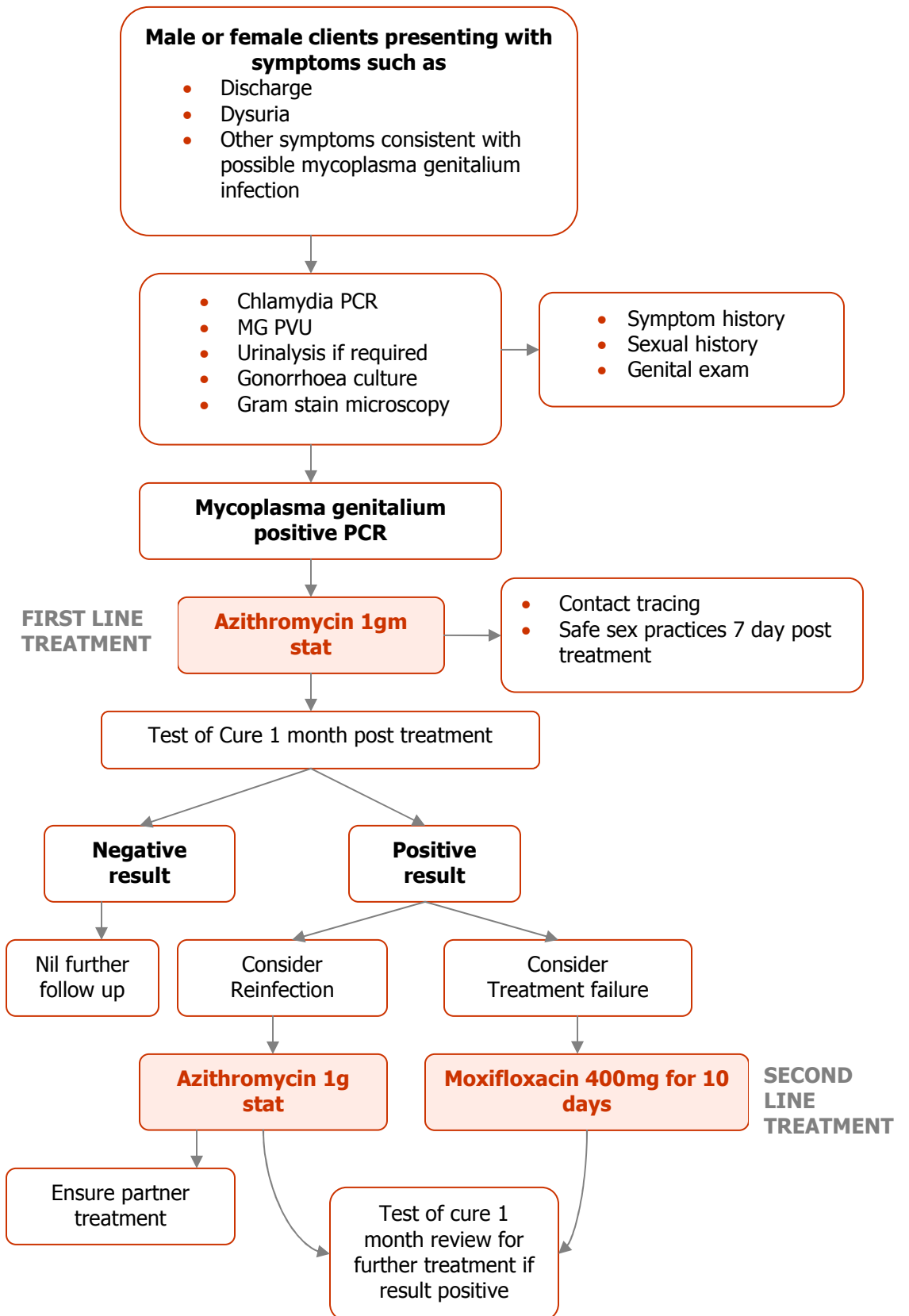
PUBLIC HEALTH CONSIDERATIONS - FOLLOW UP AND REVIEW

- Clients are advised to contact trace all sexual contacts for past 6 months.
- Protected sex is recommended for a minimum of seven days following treatment and until all sexual contacts are treated.
- Re-infection is common and retesting is advised at one month for all clients
- Contacts of MG should be treated empirically with 1gm of Azithromycin and screened accordingly
- All clients with positive results will undergo follow up according to MSHC follow up procedures including recall for treatment and results, serological monitoring, test of reinfection, test of cure, Department of Human Services (DHS) notification and surveillance forms, partner notification and assistance in contact tracing.

MEDICATION FORMULARY ^{11,13}

DRUG	INDICATIONS	ROUTE	DOSE	FREQUENCY	THERAPEUTIC CLASS/ Poisons Schedule	CONTRAINDICATIONS/ INTERACTIONS	PRECAUTIONS/ ADVERSE EFFECTS
Azithromycin	Uncomplicated MG infection	Oral	1 gm	Single dose	Macrolide B1 S4	Macrolide, ketolide hypersensitivity	Pneumonia, renal and hepatic impairment, lactation. Children <16 years
						Ergot derivatives, cyclosporine, digoxin, antacids, terfenadine, coumarins	GI upset Super infection, colitis, vaginitis
Moxifloxacin	Treatment failure to Azithromycin from test-of-cure	Oral	400 mg	Daily for 10 days	Fluroquinolone – broad spectrum B3 S4	Patients with a history of prolonged QT interval; hypokalaemia, or combined with drugs known to prolong the QT interval (anti-arrhythmic; tricyclic antidepressants, antipsychotic)	Cease Rx at first sign of tendon pain or inflammation
						Absorption impaired by certain preparations causing lower than desired plasma effects - separate administration by at least 2 hrs after ingestion of antacids or preparations containing Mg, Al, Ca, Zn or Fe.	QT prolongation Tendon rupture involving Achilles tendon Not recommended in children or adolescents as may result in damage to growing cartilage.

CLINICAL ALGORITHM



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