Clinical education:

Urethral symptoms in men

Dr Melanie Bissessor, March 2021

MSHC
MELBOURNE SEXUAL HEALTH CENTRE

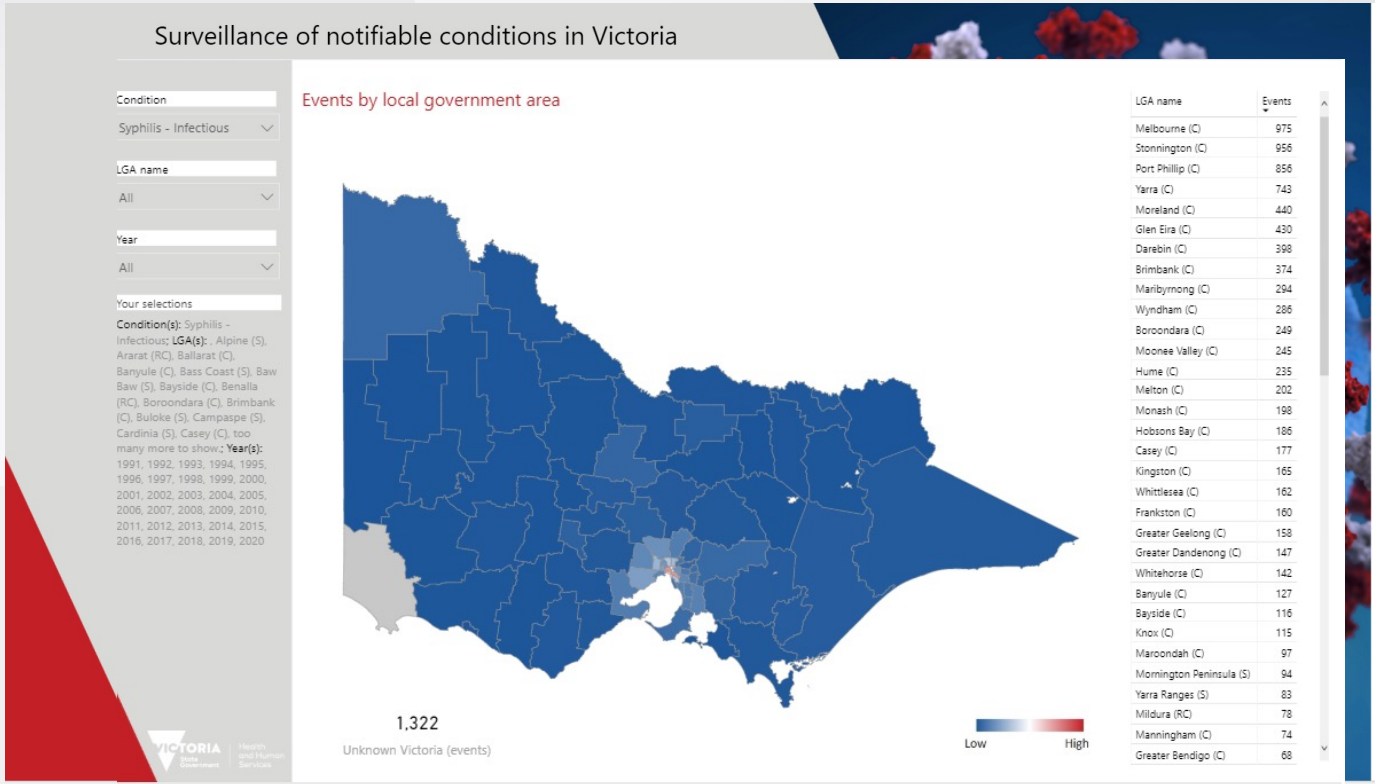
Part of AlfredHealth

Session Overview

- www.mshc.org.au
- VIC DHHS
- Interactive Infectious Disease Report
- scenarios

MSHC website-Health Professionals tab

VIC DHHS Interactive Infectious Disease Report



Part of AlfredHealth

MSHC
MELBOURNE SEXUAL HEALTH CENTRE

Classification

- Gonococcal Urethritis
  - *Neisseria gonorrhoea*
- Non-Gonococcal Urethritis (NGU)
  - ~20-30% *Chlamydia trachomatis*
  - ~10-15% *Mycoplasma genitalium*
  - ~5% less common causes
  - ~50% No pathogen identified

Symptoms

- Dysuria
  - onset, duration, severity, intermittent continuous….
- Urethral discharge
  - onset, colour, amount, underwear staining
    - tissue paper sign?
- Urethral discomfort
  - pain, irritation, itch, tingling….

Complicated Symptoms

- Scrotal pain and swelling
- Phimosis or paraphimosis
- Conjunctivitis
- Reactive Arthritis
- Reiter's Syndrome
- Disseminated Gonococcal Infection

Infectious Causes

- **Common**
  - *Neisseria gonorrhoea*
  - *Chlamydia trachomatis*
  - *Mycoplasma genitalium*
- **Less Common**
  - *Herpes Simplex*
  - *Adenovirus*
  - *Trichomonas vaginalis*
  - UTI

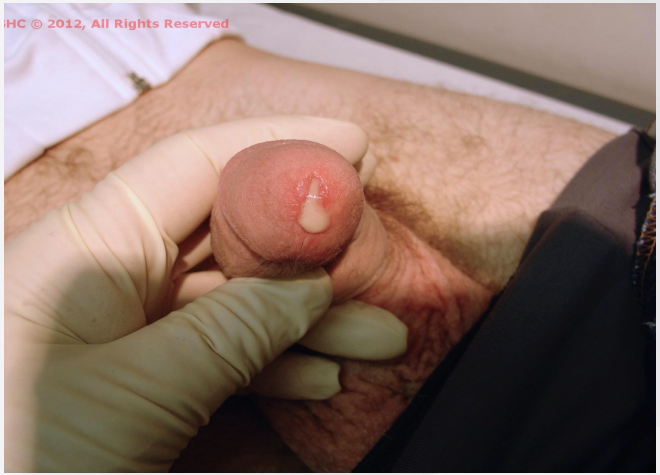
- **Others Implicated**
  - *Vaginal commensals*
    - *Ureaplasma urealyticum/parvum*
    - *Gardnerella vaginalis*
  - Oropharyngeal flora
    - *Neisseria meningitidis*
    - *Haemophilus* spp.
    - *Streptococcus* spp.

Non-Infectious Causes

- Renal calculi / colic
- Urethral stricture
- Phimosis
- Catheterization or instrumentation of the urethra.
- Congenital abnormalities
- Chemical irritation
- Tumour
- Steven-Johnson Syndrome.
- Bacterial urethritis in association with urinary tract infection
- Bacterial prostatitis
- Psychosomatic cause including guilt and anxiety

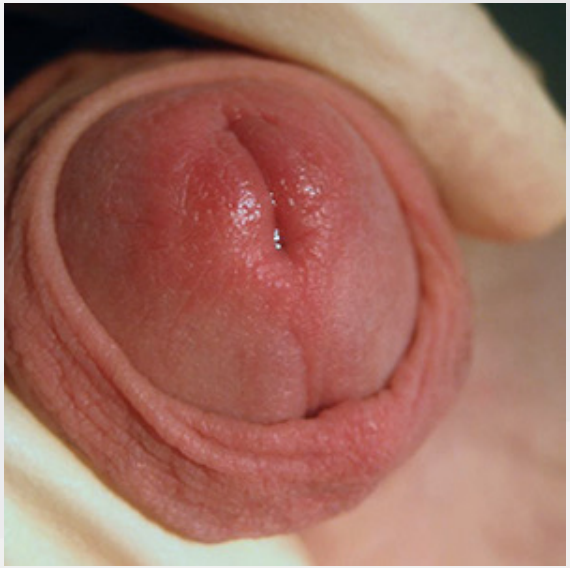
Gonococcal Urethritis

- rarely asymptomatic
  - <<10%
- incubation
  - 1 to 14 days(~3 days)
- purulent discharge
  - scanty/moderate/profuse
  - underwear staining
  - tissue paper sign
- dysuria
  - may be absent
  - generally not severe
- urethral discomfort
- meatitis



Non-Gonococcal Urethritis

- incubation
  - chlamydia- 2 to 4/52 (~3/52)
  - MG- unknown (thought to be longer than chlamydia)
- dysuria
  - absent to mild to moderate
  - intermittent to continuous
  - mild to moderate
- urethral discomfort
- meatitis

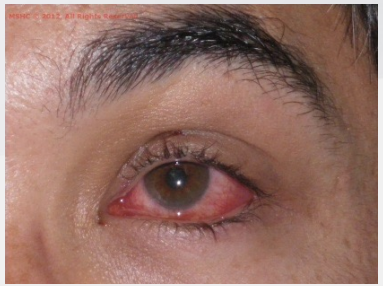


Severe Dysuria

- Herpes Simplex Virus
- sudden Onset, ~days
- meatitis/ulceration
  - Tender
- discharge +/-
- inguinal lymphadenopathy +/-
- constitutional symptoms
  - fever/myalgia/
  - arthralgia

Severe Dysuria

- Adenovirus
- seasonal variation
- sudden onset
- meatitis++
- discharge +/-
- inguinal lymphadenopathy +/-
- conjunctivitis +/-
- constitutional symptoms

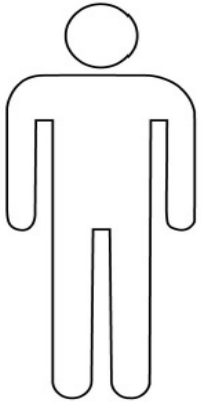


Clinical Approach

- History
  - symptomatology
  - last sexual contact
  - gender source
- Examination
  - meatus
  - nature of discharge

STI tool

Men with urethral irritation,dysuria and/or discharge



- First-void urine - 15-20 ml only - for chlamydia, gonococcal and **Mycoplasma genitalium** NAAT testing.

Does NOT have to be early morning specimen, and time since previous urination is irrelevant.

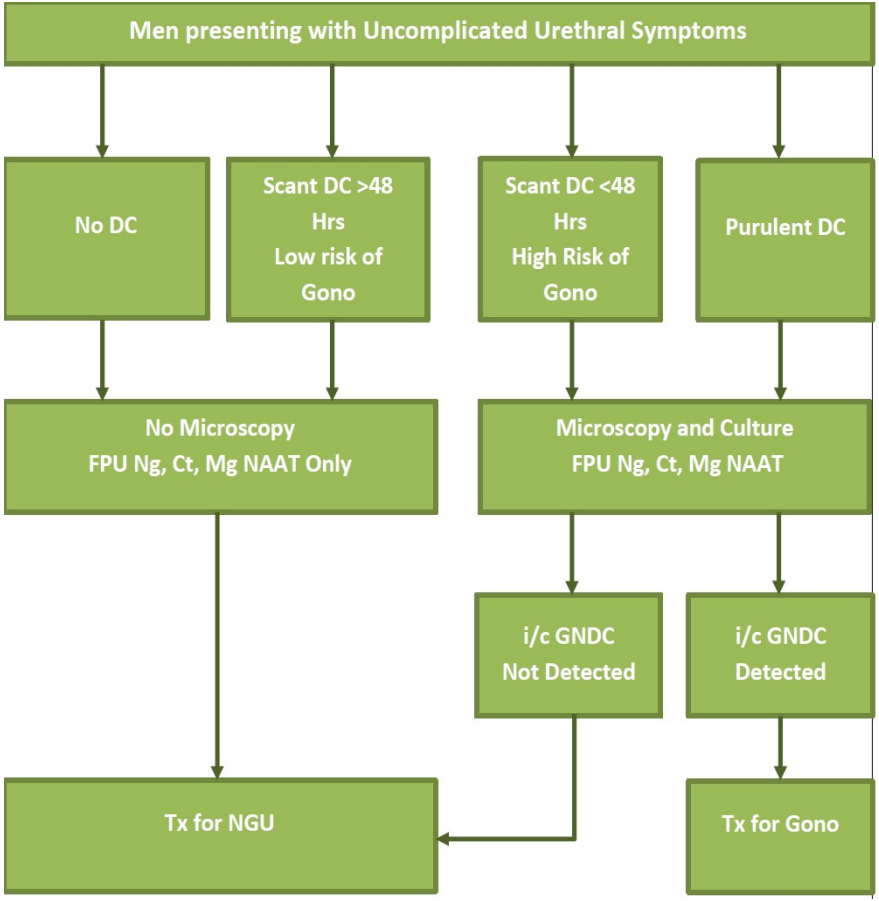
- Swab of discharge (if present) for bacterial (gonococcal) culture

Swab of discharge is sufficient; doesn't have to be a urethral swab.

Investigations

- FPU (or Ur Swab) for NAAT
  - *N.gonorrhoea*
  - *C.trachomatis*
  - *M.genitalium (+Macrolide Resistance Mutation(MRM)*
- *gonorrhoea suspected*
  - *smear of discharge for gram stain*

  plus
  - *gonococcal mcs*


Men presenting with Uncomplicated Urethral Symptoms
No DC
Scant DC >48 Hrs Low risk of Gono
Scant DC <48 Hrs High Risk of Gono
Purulent DC
No Microscopy FPU Ng, Ct, Mg NAAT Only
Microscopy and Culture FPU Ng, Ct, Mg NAAT
i/c GNDC Not Detected
i/c GNDC Detected
Tx for NGU
Tx for Gono

Matthew

- 26 year old man presents with urethral discharge
- Discharge and dysuria started 2 days after having condomless insertive anal sex with a casual male partner
- Nil other symptoms
- Examination..

- purulent discharge
- redness at meatus/urethral tip
- no lesions/blisters/ulcers/rashes

What could it be?

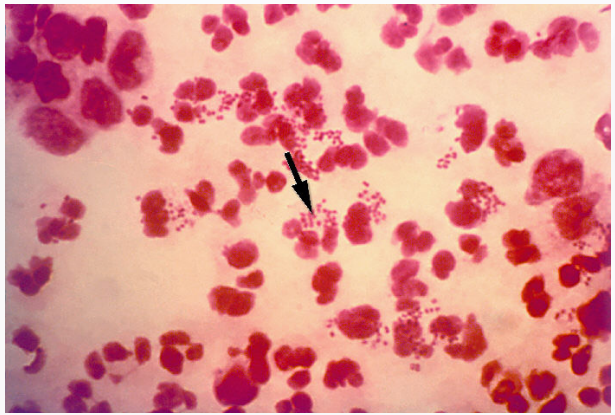
Investigations

- Urethral discharge:
  - smear of discharge for gram stain
  - gonococcal MCS
- FPU for gonorrhoea/chlamydia NAAT
- FPU for MG PCR and MRM
- pharyngeal and anal swab for gonorrhoea/chlamydia NAAT
- serology for HIV and Syphilis

Matthew

Test: Ur Micro

PMNs:	++++
Epi Cells:	Positive
Comments:	
Bacteria List:	GNDC (intracellular), GNDC (extracellular)
Bacteria Comments:	



Matthew

- high suspicion of gonorrhoea:
  - purulent discharge
  - onset within soon after exposure
  - MSM or overseas traveller

Results

- HIV: negative
- Syphilis: negative
- pharyngeal gonorrhoea/chlamydia :negative
- FPU chlamydia : negative
- FPU gonorrhoea positive
- gonococcal culture:
- *N.gonorrhoea isolated,* + *sensitivity report*

Matthew

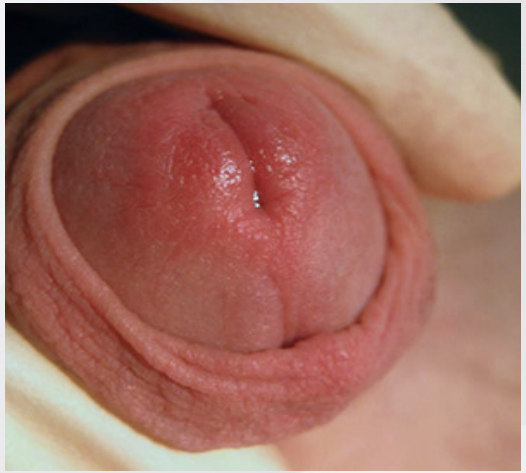
- diagnosis
  - Gonococcal urethritis
- treatment
  - Azithromycin 1g oral once with food
  - Ceftriaxone 500mg with 2ml lignocaine 1% IMI once
  - no sex x 7 days
- Contact trace - Inform all partners and advise them of the treatment needed:

  - Let Them Know website

  http://letthemknow.org.au/

Geoff

- Jerry 25 year old heterosexual
  - 6 Female CSP last 3/12
  - 30 Female CSP last 12/12
  - IDU Never
  - sex overseas
- 4/7 of dysuria and clear discharge

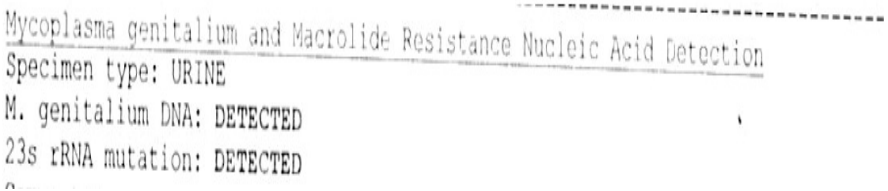


Geoff

- investigations
  - FPU gonorrhoea/chlamydia NAAT
  - FPU MG PCR and MRM
  - HIV and syphilis serology
- diagnosis
  - NGU
- Doxycycline 100mg oral BD for 7/7, with food
- no Sex for 7/7
- review in 7/7 if not resolved

Geoff

- FPU Ng Not Detected
- FPU chlamydia detected
- FPU MG positive:



Mycoplasma genitalium and Macrolide Resistance Nucleic Acid Detection

Specimen type: URINE

M. genitalium DNA: DETECTED

23s rRNA mutation: DETECTED

Clinical scenarios for MG

Macrolide-sensitive M. genitalium

1. pre-treat with doxycycline 100mg bd 7 days (many will have already started this for NGU) then
2. Follow with 4 days of combination therapy comprising: doxycycline 100mg bd together with azithromycin 1g first day then three days of 500mg daily (total 2.5g)
3. offer testing to contacts, particularly in an ongoing relationship
4. no condomless sex until TOC negative
5. TOC 2-3 weeks after completing BOTH antibiotics
6. Please always complete TOC template in CPMS at TOC visit - listing adherence, side effects and reinfection risk

Clinical scenarios for MG

Macrolide-resistant M. genitalium

1. pre-treatment: doxycycline 100mg bd 7 days then
2. Follow with 7 days of combination therapy comprising: doxycycline 100mg bd together with moxifloxacin 400mg daily
3. offer testing to contacts, particularly in an ongoing relationship
4. no condomless sex until TOC negative
5. TOC 2-3 weeks after completing BOTH antibiotics
6. Please always complete TOC template in CPMS at TOC visit - listing adherence, side effects and reinfection risk

Clinical scenarios for MG

Contact of M. genitalium

1. There are two approaches: a) test and only treat a positive MG result in a contact or b) presumptive (immediate) treatment of a contact when simultaneous treatment of a couple to prevent reinfection is important (eg PID or urethritis in a continuing sexual relationship) or if follow-up would be difficult. It is justifiable in many contacts to just treat if they test MG positive but bear in mind there is a risk of false negative results with low load infections and this is particularly important where a female is at risk of PID.
2. MG prevalence in contacts: women 48%, MSM 42% (mostly rectal), hetero men 31%.
3. When testing, include a rectal swab and urine for MSM. Vaginal swabs are more sensitive than urine in women. Pharyngeal infection is uncommon and testing generally not indicated (1-2%)
4. If a contact has a negative test and you are concerned about a risk of a false negative result consider repeating the test in 2-4 weeks to ensure it is persistently negative.
5. When treating a contact, pretreat with doxycycline 100mg bd 7 days then use combination therapy based on the resistance result of the positive partner or the contact if they have tested positive
6. Avoid condomless sex until TOC negative
7. TOC 2-3 weeks after completing all antimicrobial therapy.
8. Please always complete TOC template in CPMS at TOC visit - listing adherence, side effects and reinfection risk