Gonorrhoea

MANAGEMENT SUMMARY

TEST IF:

- Person has signs or symptoms of gonorrhoea, e.g. urethritis in males.
- Person is a sexual contact of gonorrhoea.
- Routine sexual health check in asymptomatic women.
- Antenatal screening for STIs.
- Pre-termination of pregnancy (TOP) or pre-intrauterine device (IUD) insertion.
- Suspected pelvic inflammatory disease (PID).
- Suspected epididymo-orchitis.

RECOMMENDED TESTS

- **Female:** A cervical swab if undertaking a speculum examination (culture/NAAT) or a self-taken vaginal swab if asymptomatic (or examination declined) and no other tests required (NAAT testing only).
- **Male:** Take urethral swab with smallest possible swab, e.g. pernasal (for culture).
- **Both sexes:** Anorectal or pharyngeal swab if indicated.

Treat immediately if high index of suspicion e.g. symptoms and/or signs, or contact of gonorrhoea.

- Start treatment for patient and sexual partner(s) without waiting for lab results.

TREATMENT

- **If antimicrobial susceptibilities not available** or Ciprofloxacin resistant or pregnant or breastfeeding:
  - Ceftriaxone 500mg im stat (make up with 2ml lignocaine 1% or as per data sheet) PLUS azithromycin 1g stat (both drugs category B1).
- **If isolate is Ciprofloxacin sensitive:**
  - Ciprofloxacin 500mg po stat PLUS azithromycin 1g stat.
- If clinical PID, treat as per PID guideline.
- Refer to full guideline if case has drug allergies.
- Advise to avoid having sex, or use a condom, for 7 days after initiation of treatment and/or 1 week after their partner(s) treatment.

PARTNER NOTIFICATION

- Be clear about language: 'partner' implies relationship – all sexual contacts in the last 2 months should be advised so they can be tested and treated.
- Contact(s) should have a sexual health check and if asymptomatic treat empirically for gonorrhoea with ceftriaxone 500mg im stat (make up with 2ml lignocaine 1% or as per data sheet).
- Contacts should be treated without waiting for their test results; if positive, refer to specific guideline.
- Most choose to tell contacts themselves; giving written information is helpful.
- Notifying all contacts may not be possible, e.g. if there is insufficient information or a threat of violence.

FOLLOW-UP

- By phone or in person, 1 week later.
- No unprotected sex for 1 week post treatment?
- Completed/tolerated medication?
- All notifiable contacts informed?
- Any risk of re-infection? Re-treatment necessary if re-exposed to untreated contact.
- Test of cure is only needed if symptoms don't resolve. Re-test by culture in 3 days.
- Re-infection is very common; offer repeat sexual health check in 3 months.

Further guideline information – www.nzshs.org or phone the local sexual health service.

This Best Practice Guide has been produced by NZSHS, and is adapted from the CMDHB Best Practice Guideline.
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Introduction

- Gonorrhoea is caused by infection with the bacterium *Neisseria gonorrhoeae*.
- It is highly infectious and can infect the endocervix, urethra, rectum, pharynx, and conjunctivae.
- Transmission is through:
  - sexual contact (oral, vaginal or anal)
  - sexual practices such as fingering, which allow inoculation of infected secretions onto mucous membranes
  - or from mother to baby at delivery (neonatal conjunctivitis).

Gonorrhoea is most commonly diagnosed in:

- People < 25.
- People who have multiple sexual contacts.
- People who have used condoms inconsistently.

Test

- People with possible symptoms and signs of gonorrhoea infection.
- Sexual contacts of gonorrhoea.
- Women requesting a sexual health check.
- Women having antenatal screening.
- Pre-TOP and pre-IUD insertion.
- Men with epididymo-orchitis.
- Women with presumptive PID.

Symptoms and signs

Females

- Often asymptomatic, but may complain of vaginal discharge, dysuria, abnormal bleeding or lower abdominal pain.
- There may be signs of purulent cervical discharge, easily induced cervical bleeding, purulent urethral discharge, or abdominal tenderness.

Males

- Men with urethral infection are usually symptomatic with dysuria and/or urethral discharge (see urethritis guideline www.nzshs.org/guidelines/Urethritis-in-Men-guideline.pdf).
- Incubation period about 10 days (average 2-5).
- There may be purulent urethral discharge or signs of epididymo-orchitis on examination (see epididymo-orchitis guideline www.nzshs.org/guidelines/Epididymo-orchitis-guideline.pdf).

Note: Pharyngeal and rectal infections in both sexes are usually asymptomatic but occasionally there may be pharyngeal symptoms, anal discharge, anal bleeding or discomfort.

Complications

- PID, infertility, chronic pelvic pain, ectopic pregnancy.
- Epididymo-orchitis.
- Disseminated infection manifested by arthritis, skin lesions, meningitis.
- Fitz-Hugh Curtis syndrome (peri-hepatitis).
- Adult gonococcal conjunctivitis – should be referred urgently to ophthalmology.

Diagnostic tests

Culture

Advantages

- Sensitive, specific and cheap.
- Allows for antimicrobial susceptibility testing.

Disadvantages

- Important to get specimen to laboratory within a few hours as there is loss of viable organisms so transport delays can result in false negatives.

NAATS (nucleic acid amplification tests)

- Many NZ laboratories are now offering NAAT testing for gonorrhoea in conjunction with chlamydia testing.

Advantages

- More sensitive than culture, particularly for non-genital specimens.
- Allows for testing on a wider range of specimens.
- Dual testing for chlamydia can be done on the same specimen.

Disadvantages

- Cannot test for anti-microbial susceptibilities – it is therefore recommended that an additional specimen is sent for culture if gonorrhoea is clinically suspected.
- **False positives can occur on rare occasions** so supplementary testing with a different NAAT is recommended if culture has not been done or if the culture is negative. Discussion with laboratory is recommended for unexpected positive results.

Recommended specimens

Female

Culture

- Speculum examination is required – take an endocervical swab for culture and susceptibility testing.
- **A vaginal swab is not a suitable specimen for culture**.
- **Do not refrigerate** swab as *Neisseria gonorrhoeae* is sensitive to temperature.
- Ensure prompt transport to laboratory within a few hours.

NAAT (e.g. PCR, SDA)

- If patient requires a speculum examination collect an endocervical swab.
- If gonorrhoea is clinically suspected take a second endocervical swab for culture and susceptibility testing.
- If the woman is asymptomatic and a speculum examination is not necessary or declined – a self-collected vaginal swab has similar sensitivity to endocervical specimens – instruct the woman to insert the swab 4cm (thumb's length) into vagina, rotate and replace in swab container.
- **Urine specimens are not recommended in females, due to low sensitivity when compared to vaginal swabs.**

Male

- Asymptomatic men, i.e. no urethral discharge or dysuria, who are not contacts of gonorrhoea and who have normal examination findings, do not require routine testing for gonorrhoea.

Culture

- Take a urethral swab if complaining of dysuria, urethral irritation, urethral discharge, or if urethral discharge is noted on examination (use smallest possible swab to minimise discomfort, e.g. pernasal).
- **Do not refrigerate** swab as *Neisseria gonorrhoeae* is sensitive to temperature.
- Ensure prompt transport to laboratory within a few hours.

NAAT (e.g. PCR, SDA)

- First catch urine specimen.

Note: A urethral swab for anti-microbial susceptibility testing is also recommended if urethral symptoms or visible discharge is present (see urethritis guideline www.nzshs.org/guidelines/Urethritis-in-Men-guideline.pdf).

Males and females

Culture

- Anorectal and/or pharyngeal swab depending on sexual practices, e.g. men who have sex with men (see sexual health check guideline www.nzshs.org/guidelines/Sexual-Health-Check-guideline.pdf).
- Anorectal swabs for males and females can be collected by gently inserting a bacterial culture swab 4cm into the anal canal, rotating and then replacing into the swab container.
- Pharyngeal culture swab is wiped across the posterior pharynx, tonsils and tonsillar crypts.

NAAT

- Routine pharyngeal testing not recommended.
- More sensitive than culture for non-genital sites but less specific so false positives may occur. For further info refer STIGMA MSM Testing Guidelines 2010 www.stigma.net.au/stitesting.html.
- Any unexpected positive results should be discussed with a specialist.
- Anorectal and/or pharyngeal swab depending on sexual practices.
  - Collected in similar manner to culture.

Management

- **Dual therapy is routinely recommended as co-infection with chlamydia is common.**
- Dual therapy is still recommended even if a chlamydia test is negative, due to increasing anti-microbial resistance to gonorrhoea.
- It is essential to check the susceptibility profile of the isolate to ensure successful treatment.
- **Resistance to penicillin, tetracycline and ciprofloxacin, is widespread in New Zealand.** These antibiotic agents are therefore not suitable for treatment of gonorrhoea when anti-microbial susceptibilities are not available.
- Patients must be advised to use condoms or abstain from intercourse for 7 days after treatment or until all sex contacts have been treated.

Treatment regimens

Ciprofloxacin resistant or antibiotic susceptibilities not available

- Ceftriaxone 500mg im stat (make up with 2ml lignocaine 1%) AND azithromycin 1g stat po.

Ciprofloxacin susceptible

- Ciprofloxacin 500mg im stat AND azithromycin 1g stat.

Pregnancy and breastfeeding

- Ceftriaxone 500mg im stat AND azithromycin 1g stat.
- Both drugs pregnancy category B1.

Allergy to ciprofloxacin

- Ceftriaxone 500mg im stat AND azithromycin 1g stat.

Allergy to penicillin

- **Note:** Cross-allergy to third generation cephalosporins such as ceftriaxone is rare.
- Contraindications to administration of ceftriaxone are hypersensitivity to any cephalosporin or previous severe hypersensitivity reaction to penicillin or other beta-lactam drug.
- Discuss management with specialist sexual health clinic.

Complicated infections

Gonococcal PID (see PID guideline www.nzshs.org/guidelines/PID-guideline.pdf)

- Ceftriaxone im stat (make up with 2ml lignocaine 1% or as per data sheet) PLUS oral doxycycline 100mg twice daily for 14 days PLUS metronidazole 400mg twice daily for 14 days.
- Severe PID should be referred to gynaecology in-patient services.

Gonococcal epididymo-orchitis (see epididymo-orchitis guideline www.nzshs.org/guidelines/Epididymo-orchitis-guideline.pdf)

- Ceftriaxone 500mg im stat plus oral doxycycline 100mg twice daily for 14 days.

Partner notification and management of sexual partners

Partner notification

- Be clear about language: 'partner' implies relationship – all sexual contacts in the last 2 months should be advised so they can have a sexual health check and treatment.
- Contacts should be treated without waiting for their test results; if positive, then their recent contacts need to be informed.
- Most choose to tell contacts themselves.
- Giving written information is helpful.
- Notifying all contacts may not be possible, e.g. if there insufficient information or a threat of violence.

Management of sexual partners/contacts

- Perform a full sexual health check.
- Do not wait for test results – treat empirically for gonorrhoea.
- If susceptibility profile of isolate from index case is known – treat accordingly.
- If susceptibility profile of isolate from index case is not known, treat with ceftriaxone 500mg im stat (make up with 2ml lignocaine 1% or as per data sheet) AND azithromycin 1g stat.
- Advise them to use condoms or abstain from sex for 7 days until results of tests are available.
- If they test positive for gonorrhoea – partner notification as above.

Follow-up

- The index case should be followed-up by phone or in person 7 days after treatment to ensure symptom resolution, give results and check that all partners/contacts have been notified.
- Culture results and susceptibilities should be checked to ensure that appropriate treatment has been given.
- Re-treatment is required if there has been any unprotected sex with untreated sexual partners/contacts during the follow-up interval.
- Patient should be asked to re-attend for a sexual health check-up in 3 months (test of re-infection).

Test of cure

- Test of cure is not routinely required for patients who are asymptomatic after completing treatment, as all regimens are >95% effective.

Referral guidelines

Referral to or discussion with a specialist sexual health service is recommended for:

- Management of sexual partners if clinician wishes.
- Recurrent gonorrhoea.
- Patients with anorectal symptoms that may be STI related.
- Complicated clinical situations where management advice is needed, e.g. unexpected positive NAAT test.

Further guideline information – www.nzshs.org or phone the local sexual health service.

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