Pelvic Inflammatory Disease (PID) MANAGEMENT SUMMARY

TEST IF

- Woman at risk of STIs presents with lower abdominal/pelvic pain – see Express STI Testing Questionnaire www.nzshs.org/guidelines

Note: Most laboratories are automatically performing multiplex NAAT testing for chlamydia & gonorrhoea (+/-trichomoniasis).
False positive gonorrhoea results are possible in low prevalence populations – see NZSHS Management of Gonorrhoea 2017, and Response to the Threat of Antimicrobial Resistance www.nzshs.org/guidelines.

RECOMMENDED TESTS – see Sexual Health Check Guideline www.nzshs.org/guidelines

- Vulvovaginal NAAT swab for chlamydia & gonorrhoea testing prior to speculum insertion. Insert speculum, examine vagina and cervix.
- Endocervical culture swab for gonorrhoea (if gonorrhoea culture available)
- High vaginal culture swab for candida & BV & trichomoniasis (if NAAT for trichomoniasis not available)
- Additional anorectal NAAT swab for chlamydia & gonorrhoea testing as indicated based on sexual history
- Bimanual examination for pelvic masses or tenderness
- Urine pregnancy test and urinalysis dipstick
- Universal serology for HIV and syphilis
- Targeted hepatitis B and C serology if hepatitis B status unknown and risk factors present
- Full blood count (FBC) and C-reactive protein (CRP) in severe cases or diagnostic uncertainty
- Vital signs: Temperature, pulse, blood pressure
- Pain score: Mild PID = normal vital signs and pain score <5/10, moderate PID = normal vital signs and pain score ≥5/10

Treat immediately on the basis of symptoms of lower abdominal pain and EITHER uterine OR cervical OR adnexal tenderness.

SEVERITY ASSESSMENT

PID IS SEVERE IF:

- Acute abdomen
- Pregnant
- Fever, vomiting or systemically unwell
- Intolerant of oral therapy
- Clinical failure at review

REFER

- Severe PID
- Ectopic pregnancy suspected
- Severe drug allergies to usual regimen
- Persistent or repeat PID where reinfection is excluded as *Mycoplasma genitalium* testing may be required

MILD/MODERATE PID

- **Ceftriaxone 500mg** im stat (make up with 2ml lignocaine 1% or as per data sheet) PLUS
- **Doxycycline 100mg** po twice daily for 2 weeks PLUS
- **Metronidazole 400mg** po twice daily for 2 weeks. *(Metronidazole may be discontinued at review if not tolerated.)*
- For drug allergies refer to full guideline at www.nzshs.org/guidelines
- Advise treatment may take time to work
- Advise to abstain from sex until abdominal pain has settled and to use condoms for 2 weeks after initiation of treatment and until 1 week after sexual contact/s have been treated

PARTNER NOTIFICATION AND MANAGEMENT OF SEXUAL CONTACTS

- Be clear about language: 'partner' implies relationship – all sexual contacts in the last 3 months should be notified
- Contact/s should have a sexual health check and if asymptomatic be treated for chlamydia with azithromycin 1g po stat, without waiting for test results
- If sexual contact/s has symptoms of urethritis (see Urethritis in Males guideline www.nzshs.org/guidelines)
- If contacts test positive for an STI, refer to specific guideline www.nzshs.org/guidelines
- Advise contacts to abstain from sex or use condoms for 1 week from the start of treatment and until results of tests are available
- 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

72 HOUR FOLLOW-UP FOR MODERATE/SEVERE PID

- Repeat bimanual exam to assess resolution of signs and refer if not improved
- No unprotected sex?
- Tolerated medication?
- Notifiable contacts informed?
- Any risk of reinfection? Will need further treatment if re-exposed to untreated contact

1 TO 2 WEEK FOLLOW-UP FOR MILD PID (PHONE OR IN PERSON)

- As above – bimanual where practical or where symptoms not improved
- Re-infection is common; offer repeat sexual health check in 3 months

The Ministry of Health supports the use of these clinical guidelines, developed by clinical experts and professional associations to guide clinical care.
Further guideline information – www.nzshs.org/guidelines or phone a sexual health specialist.
This STI Management Guideline Summary has been produced by NZSHS. Every effort has been taken to ensure that the information in this guideline is correct at the time of publishing (September 2017).

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Introduction

- Pelvic inflammatory disease (PID) is the term used to describe upper genital tract infection in women.
- Infection may involve the endometrium, with or without involving the fallopian tubes and peritoneal space.
- PID is usually a sexually transmitted condition.
- The organisms most commonly implicated are *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, mycoplasmas and mixed anaerobes.
- True incidence is unknown due to non-specificity of diagnostic signs.

Risk factors

- Age < 30.
- Recent change in sexual contact.
- Multiple sexual contacts.
- Previous STI.

In addition to sexual transmission, PID may follow:

- Intrauterine device (IUD) insertion.
- Termination of pregnancy.
- Postpartum states.
- Upper genital tract instrumentation.

Symptoms and Signs

- Estimated up to 60% sub-clinical – that is may have minimal or no symptoms.
- May present with lower abdominal pain, deep dyspareunia, abnormal vaginal bleeding or discharge.
- On examination may have cervical motion tenderness, uterine and/or adnexal tenderness, cervicitis or fever.

Complications

- Tubo-ovarian abscess.
- Chronic pelvic pain.
- Ectopic pregnancy and tubal factor infertility.
- Perihepatitis (Fitz-Hugh Curtis syndrome) occurs rarely.

Diagnosis

- Diagnosis is clinical, taking into account the history, clinical findings and supplemental tests.
- No single laboratory test is diagnostic of PID and STI tests will often be negative.
- A low threshold for treatment is appropriate in view of important sequelae and diagnostic uncertainty.

Initiate PID treatment for the following criteria

- Lower abdominal pain AND one or more of the following:
- Uterine tenderness OR adnexal tenderness OR cervical motion tenderness.

Additional supportive features

- Abnormal cervical or vaginal mucopurulent discharge.
- Fever >38°C.
- Elevated white blood cell (WBC) or CRP.
- Confirmed infection with an STI or bacterial vaginosis.

Differential diagnoses

The main differential diagnoses to consider are:

- Pregnancy complications, e.g. ectopic, spontaneous abortion.
- Appendicitis.
- Urinary tract infection.
- Ruptured ovarian cyst.

Diagnostic Tests (see Sexual Health Check guideline www.nzshs.org/guidelines)

All women with suspected PID should have a full evaluation for STIs including:

- A vulvovaginal NAAT swab for chlamydia & gonorrhoea testing prior to speculum insertion.
- Insert speculum, examine vagina and cervix.
- Endocervical culture swab for gonorrhoea (if gonorrhoea culture available).
- High vaginal culture swab for candida & BV & trichomoniasis (if NAAT for trichomoniasis not available).
- Additional anorectal NAAT swab for chlamydia & gonorrhoea testing as indicated based on sexual history.
- Bimanual examination for pelvic masses or tenderness.
- Urine pregnancy test and urinalysis dipstick.
- Universal serology for HIV and syphilis.
- Targeted hepatitis B and C serology if hepatitis B status unknown and risk factors present.
- Consider FBC and CRP in severe cases or diagnostic uncertainty.
- Vital signs: Temperature, pulse, blood pressure.
- Pain score: Mild PID = normal vital signs and pain score < 5/10; moderate PID = normal vital signs and pain score ≥ 5/10.

Management

- Assess for PID severity (mild, moderate or severe).
- Treatment should cover for infection with gonorrhoea, chlamydia and anaerobes.
- Patients with severe infection, pregnancy or a suspected tubo-ovarian abscess require gynaecology referral.
- Advise to abstain from sex until abdominal pain has settled and to use condoms for 14 days from the start of treatment and until 1 week after all sexual contacts have been treated.

Treatment Regimens

Mild/moderate PID

Few regimens provide >90% efficacy.

Preferred regimen:

- Ceftriaxone 500mg im stat (make up with 2ml lignocaine 1% or as per data sheet) PLUS
- Doxycycline 100mg po twice daily for 14 days (not in pregnancy) PLUS
- Metronidazole 400mg po twice daily for 14 days (pregnancy category B2). Discontinue metronidazole at review if not tolerated.
- This regimen many be used in mild penicillin allergy.

Alternate regimen:

- Consider azithromycin 1g po stat and 1 week later in place of doxycycline and metronidazole if poor compliance likely.
- There is insufficient data on long term efficacy to recommend this regiment for first line use.

Cephalosporin allergy and anaphylaxis:

- Gentamycin 5mg/kg ideal body weight IV single dose PLUS
- Doxycycline 100mg po twice daily for 14 days PLUS
- Metronidazole 400mg po twice daily for 14 days.
- Discuss with a specialist if unsure or impaired renal function.

Gonococcal PID

It is not recommended to add azithromycin for confirmed gonococcal PID for the following reasons:

- Parenteral cephalosporin therapy should be sufficient to cover gonococcal infection.
- In uncomplicated gonorrhoea azithromyin is only used to slow the development of drug resistance.
- The number of cases of gonococcal PID in NZ is small.
- Use of the 'non-azithromycin containing' regimens above is clinically effective.
- Adherence rates for two weeks of PID treatment are poor and adding azithromycin may lead to discontinuation due to gastric effects and pill burden.

Pregnancy and breastfeeding

PID in pregnancy is uncommon but associated with an increase in both maternal and foetal morbidity. It is recommended to refer to gynaecological services for assessment +/- a parenteral regimen to cover chlamydia, gonorrhoea and anaerobes.

Breastfeeding:

- Ceftriaxone 500mg im stat (make up with 2ml lignocaine 1% or as per data sheet) PLUS
- Azithromycin 1g po stat and 1 week later (pregnancy category B1).
- Metronidazole 400mg twice daily for 14 days (pregnancy category B2).

IUD users

- Evidence suggests PID treatment outcomes are not affected by the presence of an IUD.
- The decision as to whether or not an IUD should be left in situ should be made on a case by case basis in consultation with the patient. Consider removal if there is no clinical improvement after 48–72 hours of treatment.
- If the IUD is removed, recommend delaying this until approximately 24 hours into antibiotic therapy and consider ECP if unprotected sex in the previous 7 days.

Partner Notification and Management of Sexual Contacts

- Be clear about language: 'partner' implies relationship – all sexual contacts in the last 3 months should be notified.
- Contacts should have a sexual health check and treatment as a PID contact with azithromycin 1g po stat without waiting for their test results.
- If contacts test positive for an STI refer to specific guideline **www.nzshs.org/guidelines**.
- Advise contacts to abstain from sex or use condoms for 1–2 weeks from the start of treatment and until results are available.
- 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.

Follow-up

- In mild PID, patients should be reviewed in 1 to 2 weeks and bimanual examination repeated to confirm resolution of signs and review results.
- In moderate PID, patients should be reviewed in 48–72 hours and if not improving consider gynaecology referral.
- Repeat a sexual health check 3 months after treatment.

Referral Guidelines

Referral to a sexual health specialist is recommended for:

- Management of sexual contacts if clinician wishes.
- Recurrent/persistent PID.
- PID thought to be due to *Mycoplasma genitalium*.