



**OFFICIAL**

**OBSTETRICS AND GYNAECOLOGY  
CLINICAL PRACTICE GUIDELINE**

# Pelvic Inflammatory Disease (Acute)

**Scope (Staff):** WNHS Obstetrics and Gynaecology Directorate staff

**Scope (Area):** Obstetrics and Gynaecology Directorate clinical areas

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## Background

Pelvic Inflammatory Disease (PID) constitutes a general term for a spectrum of genital tract infection. The disease lacks a precise definition and not all patients complain of symptoms.

It is usually the result of infection ascending from the endocervix causing endometritis, salpingitis, parametritis, oophoritis, tubo-ovarian abscess and / or pelvic peritonitis. While sexually transmitted infections such as *Chlamydia trachomatis* and *Neisseria gonorrhoea* have been identified as causative agents, additional STIs including *Mycoplasma genitalium*, anaerobes and other organisms may also be implicated.<sup>1,2</sup> Bacterial vaginosis is a recognised association. Other organisms may be implicated in acute PID infection including (*Haemophilus influenzae*, *Streptococcus pneumoniae*, group A streptococcus and *S. aureus*). Sexually active young women are particularly at risk of PID. A high index of suspicion and a low threshold for empiric treatment of PID is recommended since the potential consequences of not treating PID are significant, resulting in infertility, ectopic pregnancy and chronic pelvic pain.<sup>3,4</sup> The risk of complications increases with delayed diagnosis or repeated episodes.

Chronic PID (> 1 month duration) may result from infection with *Mycobacterium tuberculosis* or *Actinomyces* spp. These infections are not discussed in detail in this guideline.

## Diagnosis

There is no single pathognomonic sign, symptom or investigation in the diagnosis of PID. The approach to the diagnosis should be multifaceted.

### Clinical features

The following clinical features are suggestive of a diagnosis of PID:

- Bilateral lower abdominal tenderness (sometimes radiating to the legs)
- Abnormal vaginal or cervical discharge
- Fever > 38° C (not always present)
- Abnormal vaginal bleeding- including intermenstrual, postcoital or 'breakthrough' bleeding
- Deep dyspareunia
- Cervical motion tenderness on bimanual examination (with or without palpable mass), uterine and adnexal tenderness
- Dysuria
- Right upper quadrant pain (Fitz Hugh Curtis syndrome)

### Recommended investigations

- Full blood picture
- C reactive protein
- Mid-stream urine (MC&S)
- Urine HCG to exclude complications of pregnancy e.g. ectopic pregnancy, miscarriage

- Endocervical and low vaginal dry swabs (either self-obtained by patient or during a physical examination) for *Chlamydia trachomatis* and *Neisseria gonorrhoea* PCR. First void urine can also be used for *C. trachomatis* and *N. gonorrhoeae* PCR. Endocervical or high vaginal or low vaginal swab for culture and sensitivity (gel swab). For complex or recalcitrant disease, consider adding *M.genitalium* PCR (dry swabs or first void urine).
- Serology for potentially sexually transmitted diseases where an extended STD workup appropriate (HIV infection is associated with increased risk of tubo-ovarian abscess) i.e. HIV, syphilis, HCV serology, HBV surface antigen, antibody
- Imaging – if uncertain clinical diagnosis, severe illness or if unresponsive to the initial therapy.
  - Transvaginal ultrasound scanning may be helpful when there is diagnostic difficulty but is frequently normal in early or uncomplicated disease. When supported by power Doppler, it can identify inflamed and dilated tubes and tubo-ovarian masses / abscesses. It may differentiate in some cases from appendicitis, ectopic pregnancy or ovarian cyst complications, but there is insufficient evidence to support its routine use.<sup>5,6,8</sup>
  - CT may be indicated in patients with diffuse pelvic pain, peritonitis or equivocal ultrasound.<sup>15</sup>
  - MRI has shown to be superior to TVUS in the diagnosis of PID but cost and availability are prohibitive<sup>16</sup>. There is potential for use in selected cases where further investigation is required, or theatre is contraindicated

When there is diagnostic doubt, laparoscopy may be useful to exclude other pathologies. It also enables specimens to be taken from the fallopian tubes and the Pouch of Douglas, and can provide information on the severity of the condition.<sup>7,8</sup> However it is invasive, pelvic organs may appear normal in mild disease (lower sensitivity) and it plays a limited role in the treatment of acute PID.<sup>17</sup>

## Differential diagnosis

**The differential diagnosis of lower abdominal pain in a young woman includes:**

- Ectopic pregnancy
- Acute appendicitis
- Endometriosis
- Irritable bowel syndrome (and less commonly, other gastrointestinal disorders)
- Complications of an ovarian cyst such as rupture or torsion
- Urinary tract infection
- Functional pain (pain of unknown physical origin)

## Treatment of acute PID in sexually active women with no predisposing factors

### Mild – Moderate PID: suitable for outpatient management

- PID suspected clinically or confirmed microbiologically
- Clinically well - no evidence of sepsis, haemodynamically stable, pain controlled with simple analgesia
- No evidence of TOA on TVUS
- Compliant with oral treatment and follow-up

In mild or moderate PID (in the absence of a tubo-ovarian abscess), there is no difference in outcome when women are treated as outpatients or admitted to hospital. It is likely that delaying treatment, especially in Chlamydia infections, increases the severity of the condition and the risk of long-term sequelae such as ectopic pregnancy, subfertility and pelvic pain.<sup>11</sup>

### Outpatient treatment of mild – moderate STI related PID

The response to treatment is often a good indicator of whether PID is likely.

- |  |
|--|
| <ul style="list-style-type: none"> <li>• Ceftriaxone 500 mg in 2 mL 1% lidocaine intramuscularly, or 500 mg intravenously as a single dose.</li> </ul> <p style="text-align: center;"><b>PLUS</b></p> <ul style="list-style-type: none"> <li>• Metronidazole 400 mg orally, 12 hourly for 14 days</li> </ul> <p style="text-align: center;"><b>PLUS EITHER</b></p> <ul style="list-style-type: none"> <li>• Azithromycin 1g orally as a single dose for women who are pregnant or suspected to be non-adherent to doxycycline, then Azithromycin 1 g orally as a single dose 1 week later</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Doxycycline 100 mg orally, 12 hourly for 14 days</li> </ul> |
|--|

Women should be reviewed in 72 hours from initial presentation by their General Practitioner or in the Emergency Centre. Failure to clinically improve may indicate the need for further investigation or to consider other diagnoses or alternative management such as inpatient treatment. Further review in 4-6 weeks after treatment by a GP should be performed.

### Admission to hospital is appropriate in the following:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• PID in pregnancy</li> <li>• Non adherence or intolerance to oral therapy</li> <li>• Tubo-ovarian abscess</li> </ul> | <ul style="list-style-type: none"> <li>• Lack of response to oral therapy</li> <li>• Clinically severe disease (haemodynamically unstable, pain, nausea and vomiting, pyrexia, acute abdomen)</li> <li>• Unable to exclude surgical emergency</li> </ul> |
|--|--|

Most admissions can be managed at secondary gynaecological services. Transfer to the tertiary centre may be required if there are no gynaecological services available, if specialist ultrasonography services are required or if considering surgical intervention and the gynae-oncology / endoscopy team needs to be consulted.

### Inpatient treatment of severe STI related PID

- ceftriaxone 2 g intravenously, daily  
**PLUS**
- azithromycin 500 mg intravenously, daily  
**PLUS**
- metronidazole 500 mg intravenously, 12- hourly

Until the patient is afebrile and improved, then

- doxycycline 100 mg 12 hourly orally for a minimum of two weeks and up to four weeks in complicated cases (slow clinical resolution; pelvic collections) or Azithromycin if pregnant: see above  
**plus**
- amoxicillin plus clavulanate 875 mg/125 mg, orally, 12 hourly for a minimum of 2 weeks and up to 4 weeks

### For patients with immediate severe or delayed severe hypersensitivity to penicillins

- gentamicin IV (usual dose 5 mg/kg ideal body weight see [gentamicin guidelines](#))  
**Plus**
- Azithromycin 500 mg IV daily  
**Plus**
- clindamycin 600 mg IV, 8 hourly. (Microbiology approval required for IV clindamycin within 24 hours of starting therapy).

Until the patient is afebrile and improved then,

- metronidazole 400 mg orally, 12 hourly for a minimum of 2 weeks  
**plus**
- doxycycline 100 mg 12 hourly orally for a minimum of 2 weeks or Azithromycin if pregnant: see above)

## Outpatient treatment of mild – moderate procedure related PID (non-pregnant)

For patients who develop PID after a recent pregnancy, termination or gynaecological procedure (including IUCD insertion or removal) and those with a prior history of PID, *Chlamydia trachomatis*, *Neisseria gonorrhoea* and *Mycoplasma hominis* may be implicated, together with mixed anaerobic and aerobic bacteria such as *Bacteroides spp*, anaerobic cocci, *Streptococcus spp* and enteric bacteria.

- Doxycycline 100 mg orally 12 hourly for 2 to 4 weeks
- Plus**
- Amoxicillin plus Clavulanate 875 mg /125 mg orally, 12 hourly for 2 to 4 weeks

For patients with an immediate hypersensitivity to penicillin

- Doxycycline 100 mg orally, 12 hourly for 2 to 4 weeks or if non STI related: ciprofloxacin 500 mg orally, 12 hourly
- Plus**
- Metronidazole 400 mg orally, 12 hourly for 2 to 4 weeks

## Inpatient treatment of severe procedure related PID

For **severe infection** related to pregnancy or surgery that is unlikely to be sexually acquired:

- Amoxicillin 2 g IV 6 hourly
- Plus**
- Gentamicin IV (usual dose 5mg/ kg ideal body weight. See [gentamicin guideline](#))
- Plus**
- Metronidazole 500 mg IV 12 hourly

## Alternative regimen

- Clindamycin 600 mg IV TDS (microbiology approval required within 24 hours of starting therapy).
- Plus**
- Ceftriaxone\* 2 g IV daily
- Plus**
- Azithromycin 500 mg IV daily
- \*If the patient is allergic to cephalosporin agents or has a type 1 hypersensitivity reaction to penicillin, replace ceftriaxone with gentamicin

For **mild to moderate infection**, or “step down” oral therapy

- amoxicillin+clavulanate 875+125 mg orally, 12-hourly for 14 days
- plus**
- doxycycline 100 mg orally, 12-hourly for 14 days or Azithromycin : see above

**For non- pregnant patients with hypersensitivity to penicillins** (see [Therapeutic Guidelines](#) (external website)), use:

- Doxycycline 100 mg orally, 12 hourly for 2 weeks or Ciprofloxacin 500 mg BD
- Plus**
- Metronidazole 400 mg orally, 12 hourly for 2 weeks

### Other regimens

There are many potential antimicrobial options to treat PID.<sup>18</sup> There is also increasing antimicrobial resistance among some of the organisms which may be causative e.g. Enterobacteriaceae to cephalosporins and Group B Streptococcus to clindamycin . Discuss with microbiology if above regimens are unsuitable due to allergy, other medical conditions, severe disease, unusual organism, lack of clinical response or potential need for hospital in the Home (HITH) treatment.

## Mycoplasma genitalium

There is increasing awareness of this organism as a potential pathogen in PID and other genital infections. The above treatment regimens may be ineffective for PID when *M. genitalium* is a causative organism. Refer to specific treatments within [eTG Antibiotic – Therapeutic Guidelines: Pelvic Inflammatory Disease](#). Please seek advice from the on call microbiologist for treatment and testing of partners and test of cure advice if this organism is identified.

## Follow up

- Follow up is important to ensure symptoms have resolved, that the patient was compliant with medication and that partners have been treated if *Chlamydia trachomatis* and / or *Neisseria gonorrhoea* have been detected. If any of these factors remain unresolved, a test of cure may be required.
- The patient should be reviewed within 24-48 hours to ensure symptoms and signs respond to treatment.
- Ensure the woman understands the importance of compliance with medication
- Advise the woman to avoid sexual intercourse until both she and her partner are fully treated (i.e. have completed their respective antibiotic courses).
- If there is no improvement, therapy should be re-evaluated and alternative diagnoses considered.



## Intrauterine contraceptive device

In the presence of an intrauterine contraceptive device (IUCD), consideration should be given to the removal of the device, particularly if there has been no resolution of symptoms within 72 hours or if inserted within the last 2-3 weeks. Current Australian Therapeutic Guidelines do not recommend routine removal of an IUD in the presence of PID especially if occurring 3 weeks after insertion. IDSA guidelines recommend close follow up however, if an IUD is left in place in a patient diagnosed with PID.

## Tubo- ovarian abscess

- In the presence of Tubo-Ovarian abscess ultrasound or CT guided drainage should be considered following discussion involving the Gynaecology Consultant and the Consultant Sonologist.
- Surgical treatment is another alternative management strategy that needs to be considered in severe cases or when there is evidence of pelvic abscess.
- Antibiotic courses of longer length than those recommended above (ie > 4 weeks) may be required in patients with extensive disease. Specialist consultation with Clinical Microbiologists/Infectious Diseases is recommended.

## Management of sexual partner(s) of women with PID

When a sexually transmitted infection is either proven or likely to be the cause of PID, the current sexual partner(s) should be offered health advice and screening for chlamydial and gonococcal infection through their GP. *Mycoplasma genitalium* also may infect partners see information in the HDWA “silver book”

(<http://ww2.health.wa.gov.au/Silver-book/Non-notifiable-infections/Mycoplasma-genitalium>)

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## Related WNHS policies, guidelines and procedures

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### Version history

Version number	Date	Summary
1	Aug 2025	<p>First version.</p> <p><b>History:</b> In Aug 2025 this guideline was split back into an individual document. Previously: In Sept 2017 amalgamated five individual guidelines (from section Gynaecology), dated from 2001, into one document 'Gynaecology (non-oncological)'. The content in this guideline formed one chapter of that document. Prior to Sept 2017, these chapters were individual guidelines. Contact OGD Guideline Coordinator for previous versions. Original titled as C.6.1.3.1 'Acute Pelvic Inflammatory Disease (PID)'.</p> <p><b>Changes in this version:</b></p> <ul style="list-style-type: none"> <li>• Lignocaine is now referred to as lidocaine</li> <li>• Mycoplasma- Refer to specific treatments within eTG Antibiotic – Therapeutic Guidelines: Pelvic Inflammatory Disease.</li> </ul>

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