
PELVIC INFLAMMATORY DISEASE (PID)

DEFINITION

Pelvic inflammatory disease is an infection of the female upper genital tract that involves any combination of the uterus, endometrium, ovaries, fallopian tubes, pelvic peritoneum and adjacent tissues. PID consists of ascending infection from the lower to upper genital tract.

POTENTIAL CAUSES

Most cases of PID can be categorized as sexually transmitted or endogenous and are associated with more than one organism.

Bacterial:

- *Neisseria gonorrhoeae*
- *Chlamydia trachomatis*
- *Trichomonas vaginalis*
- *Mycoplasma genitalium*
- *Mycoplasma hominis*
- *Ureaplasma urealyticum*
- Bacterial vaginosis (BV)

PREDISPOSING RISK FACTORS

- sexual contact in which exchange of body fluid may occur
- history of STI
- multiple sexual partners
- upper female genital tract instrumentation:
 - dilatation & curettage (D&C)
 - recent intrauterine device (IUD) insertion
 - therapeutic abortion (T/A)

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Pelvic Inflammatory Disease (PID)***

TYPICAL FINDINGS

Sexual Health History

- sexual contact
- recent IUD insertion or upper genital tract instrumentation

PHYSICAL ASSESSMENT FINDINGS

Cardinal Signs

- lower abdominal pain – usually bilateral
- abnormal bimanual pelvic exam that includes:
 - adnexal tenderness
 - fundal tenderness
 - cervical motion tenderness

Additional Signs & Symptoms

- fever >38°C
- dyspareunia
- abnormal vaginal bleeding or spotting
- abnormal vaginal discharge
- urinary frequency
- pelvic pain
- nausea or vomiting
- low back pain

Differential Diagnosis:

It is important to rule out other potential causes of lower abdominal pain including ectopic pregnancy, ovarian cysts, and gastrointestinal causes including appendicitis.

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Diagnostic Tests:

cervical swab for NAAT (GC/CT)

AND

cervical swab for GC culture & sensitivity

AND

urine pregnancy test

AND

vaginal swabs

- vaginal slide smear for trichomonas, yeast, and bacterial vaginosis
- swab for KOH whiff test
- vaginal pH

AND

bimanual exam for tenderness

In addition to the diagnostic tests above, offer clients presenting with proctitis routine STI and HIV screening.

CLINICAL EVALUATION

Certified practice RNs must refer to a physician or nurse practitioner (NP) all clients who present with suspected PID as defined by pelvic tenderness and lower abdominal pain during the bimanual exam.

NOTE: If an IUD is present, removal of the device is not recommended until after antibiotic therapy has been initiated and at minimum 2 doses of antibiotics have been taken.

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MANAGEMENT AND INTERVENTIONS

Goals of Treatment:

- commence rapid treatment to preserve fertility
- treat infection
- alleviate symptoms
- prevent further complications
- prevent spread of infection

Criteria for Potential Hospitalization:

The following criteria may indicate the need for hospitalization or parenteral therapy:

- surgical emergencies such as appendicitis or ectopic pregnancy that cannot be excluded
- client is pregnant
- client cannot tolerate oral treatments
- client is under the age of 19
- client has severe abdominal pain
- client has abdominal guarding, rigidity, or rebound tenderness
- client has severe nausea, vomiting, or a fever $>38.5^{\circ}\text{C}$
- client has underlying chronic illnesses such as diabetes, HIV or active Hepatitis infection
- concerns with the client's ability to complete oral antibiotic therapy that may require parenteral treatment

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TREATMENT OF CHOICE – USE ONLY IN CONSULT WITH PHYSICIAN OR NP

PID WITHOUT Bacterial Vaginosis	PID WITH Bacterial Vaginosis	Notes
<p><u>First Choice</u></p> <p>cefixime 800 mg PO in a single dose and doxycycline 100 mg PO BID for 10 days</p> <p>OR</p> <p>ceftriaxone 250 mg IM and doxycycline 100mg PO BID for 10 days</p>	<p><u>First Choice</u></p> <p>cefixime 800 mg PO in a single dose and doxycycline 100 mg PO BID for 10 days and metronidazole 500mg po bid for 10 days</p> <p>OR</p> <p>ceftriaxone 250 mg IM and doxycycline 100mg PO BID for 10 days and metronidazole 500mg po bid for 10 days</p>	<ol style="list-style-type: none"> 1. Treatment for PID covers for both gonorrhoea and Chlamydia. 2. DO NOT USE ceftriaxone or cefixime if history of allergy to cephalosporins or a history of anaphylaxis or immediate reaction to penicillins. 3. DO NOT USE azithromycin if history of allergy to macrolides. 4. DO NOT USE doxycycline if allergic to tetracycline 5. DO NOT USE lidocaine if history of allergy to lidocaine or other local anaesthetics. Use cefixime PO as alternate treatment. 6. The preferred diluent for ceftriaxone IM is 0.9 mls lidocaine 1% (without epinephrine) to minimize discomfort. 7. For intramuscular injections (IM) of ceftriaxone or spectinomycin, the ventrogluteal site is preferred 8. Use of doxycycline as the first choice is preferable in the treatment of pelvic inflammatory disease due to its increased effectiveness for the co-treatment of Chlamydia. 9. Advise client to remain in the clinic for at least 15 minutes post IM injection in case of anaphylactic reaction to treatment. Provide anaphylaxis treatment as required, using BCCDC Immunization Manual- Section V- Management of Anaphylaxis in a Non-Hospital Setting. BCCDC, Feb 2009, available at: http://www.bccdc.ca/NR/rdonlyres/52EA275F-0791-4164-ABA9-07F0183FF103/0/SectionV_Anaphylaxis_Jan05.pdf

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PID WITHOUT Bacterial Vaginosis	PID WITH Bacterial Vaginosis	Notes
<p><i>continued from previous page</i></p> <p><u>Second Choice</u></p> <p>cefixime 800 mg PO in a single dose and azithromycin 1 gm PO in a single dose repeated in 1 week (2 doses of 1 gm PO each given 7 days apart)</p> <p>OR</p> <p>ceftriaxone 250 mg IM and azithromycin 1 gm PO in a single dose repeated in 1 week (2 doses of 1 gm PO each given 7 days apart)</p>	<p><i>continued from previous page</i></p> <p><u>Second Choice</u></p> <p>ceftriaxone 250 mg IM and azithromycin 1 gm PO in a single dose repeated in 1 week (2 doses of 1 gm PO each given 7 days apart) and metronidazole 500mg PO bid for 10 days</p> <p>OR</p> <p>ceftriaxone 250 mg IM and azithromycin 1 gm PO in a single dose repeated in 1 week (2 doses of 1 gm PO each given 7 days apart) and metronidazole 500mg PO bid for 10 days</p>	<ol style="list-style-type: none"> 10. If serious allergic reaction develops including difficulty breathing, severe itchiness, have the client inform clinic staff immediately. If symptoms develop after leaving the clinic, advise the client to seek immediate emergency care. 11. Advise client about the potential for the side effects of pain, redness and swelling at the injection site or diarrhea. If any of these effects persist or worsen advise to contact health care provider 12. Azithromycin is associated with a significant incidence of gastrointestinal adverse effects. Taking medication with food or administering prophylactic anti-emetics may minimize adverse effects. 13. See BCCDC Client and Medication Information Sheets for further medication reconciliation and client information. Available at http://www.stiresource.com/brochures/indexbrochures.php

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PREGNANT OR BREASTFEEDING WOMEN

Refer all pregnant or breastfeeding women to a physician or NP.

PARTNER COUNSELLING AND REFERRAL

Counsel clients to notify sexual contacts within the previous 60 days that they require testing and treatment to cover chlamydia and gonorrhea. See Treatment of STI Contacts DST.

Unless the client tests positive for a reportable sexually transmitted infection (i.e., chlamydia, gonorrhea), the client completes partner notification.

MONITORING AND FOLLOW-UP

Clients treated for PID should return to clinic for repeat assessment (bimanual exam) to ensure pelvic tenderness is resolving 2–3 days after the onset of treatment and again 4–7 days after treatment is completed.

If test results positive for gonorrhea, refer to gonorrhea DST for monitoring and follow-up.

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POTENTIAL COMPLICATIONS

- Fitz-Hugh-Curtis syndrome
- tubo-ovarian abscess
- ectopic pregnancy
- chronic pelvic pain
- tubal factor infertility
- recurrent PID

CLIENT EDUCATION /DISCHARGE INFORMATION

Counsel client:

- to return for follow up assessment for pelvic tenderness in 48 to 72 hours after first visit and 4 to 7 days after treatment is finished
- regarding the importance of revisiting health care provider if symptoms worsen or persist
- regarding the appropriate use of medications (dosage, side effects, and need for re-treatment if dosage not completed)
- to avoid sexual contact with current partners until they and partners have completed screening and treatment
- to inform last sexual contact and all sexual contacts within the last 60 days that they require testing and treatment
- regarding harm reduction measures (condom use)
- regarding the complications from untreated PID
- regarding the risk of co infection risk for HIV when another STI is present
- the asymptomatic nature of STI and HIV

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CONSULTATION OR REFERRAL

- Refer/consult for all clients who present clinically with suspected PID to physician/NP
- Refer to physician/NP for clients who are experiencing persistent and/or worsening symptoms after treatment has been initiated

DOCUMENTATION

- PID is not reportable
- institute reporting and partner notification processes if lab reportable infections are confirmed from diagnostic tests
- Document as per agency guidelines

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