P-GU-005 PELVIC INFLAMMATORY DISEASE (PID)

DEFINITION & EPIDEMIOLOGY

- Pelvic inflammatory disease (PID) is an infectious and inflammatory disorder of the upper female genital tract, including the uterus, fallopian tubes, and adjacent pelvic structures. PID is initiated by infection that ascends from the vagina and cervix into the upper genital tract.
- *Chlamydia trachomatis* is the predominant sexually transmitted organism associated with PID. Other organisms implicated in the pathogenesis of PID include *Neisseria gonorrhoeae, Gardnerella vaginalis, Haemophilus influenzae*, and anaerobes such as *Peptococcus* and *Bacteroides* species.(1)
- Globally the disease leads to approximately 2.5 million office visits and 125,000-150,000 hospitalizations annually. The India specific data on PID is scarce(2)

ETIOLOGY

Etiology	Risk factors
The organisms most commonly isolated in cases of acute PID are N gonorrhoeae and C trachomatis. C trachomatis is an intracellular bacterial pathogen and the predominant sexually transmitted organism that causes PID.	• Multiple sexual partners, • History of prior STIs • History of sexual abuse.

PATHOPHYSIOLOGY

Most cases of PID are presumed to occur in 2 stages. The first stage is acquisition of a vaginal or cervical infection. This infection is often sexually transmitted and may be asymptomatic. The second stage is direct ascent of microorganisms from the vagina or cervix to the upper genital tract, with infection and inflammation of these structures. The mechanism by which microorganisms ascend from the lower genital tract is unclear.

Signs & Symptoms (1–3)

Specific symptoms	Common symptoms
• Lower abdominal pain	• Lower abdominal pain • Fever • Vaginal discharge • Menstrual irregularities like heavy, irregular vaginal bleeding • Dysmenorrhea • Dyspareunia • Dysuria, tenesmus • Low backache

History

H/O Present Illness

- Onset of symptoms: when it started
- Duration : duration of illness
- Character of pain: pain during menstruation, pain during intercourse can occur
- If discharge present - Character: Ask about quantity, smell, color, and consistency
- Any ulcer, swelling on the uvula or inguinal region to rule out other STI/RTI

Menstrual H/o-(R/o Pregnancy)

- Cycle – duration, regularity
- Marital status
- Obstetrical H/o
- H/o Contraceptive use like Intrauterine Device (IUD)

Past H/o

- Previous H/o similar illness

Personal H/o

- Poor genital hygiene
- H/o Unprotected sexual encounter/s
- H/o Multiple sexual partners
- H/o Recent change in sexual partners

Vital Signs

- Body temperature: fever may be there (Oral temperature >101°F (>38.3°C) is one of the additional criteria for diagnosis)
- Heart rate: mild increase heart rate may occur due to fever and pain
- Respiratory rate: no specific changes.
- Blood Pressure: no specific changes

Patient Examination(5)

Systems	Inspection	Palpation	Percussion	Auscultation	Positive sign
General examination	None	None	None	None	No specific finding
CVS	None	None	None	Routine CVS	No specific finding
RS	None	None	None	Routine RS-	No specific finding
Abdomen	None	Look for tenderness or guarding	None	Bowels sound	Lower abdomen tenderness or guarding may present
Musculoskeletal system	None	None	None	None	No specific finding
CNS	None	None	None	None	No specific finding

Pelvic Examination

"Before genital examination explain the procedure, make sure proper privacy and get consent from patient"

Look for

- uterine/ adnexal tenderness
- cervical movement tenderness

Per speculum examination

- vaginal/cervical discharge, congestion or ulcers

Diagnostic Test

- Urine pregnancy test recommended in all women suspected of PID to rule out ectopic pregnancy

- Diagnosis made usually based on clinical findings, if possible do speculum examination.
- Lab investigation is additional option. If available the following can be done; however it is not necessary.
    - Wet smear examination
    - Gram stain for gonorrhea
    - Complete blood count and ESR
    - Urine microscopy for pus cells
    - RPR test for syphilis
- One or more of the following minimum criteria are present on pelvic examination:
    - Cervical motion tenderness
    - Uterine tenderness
    - Adnexal tenderness
- One or more of the following additional criteria can be used to enhance the specificity of the diagnosis:
    - Oral temperature >101°F (>38.3°C)
    - Abnormal cervical or vaginal muco-purulent discharge
    - Presence of signs of lower genital tract inflammation (predominance of leucocytes in vaginal secretions, cervical exudates, or cervical friability)
    - Presence of abundant numbers of WBC on saline microscopy of vaginal fluid
    - Elevated erythrocyte sedimentation rate
    - Elevated C-reactive protein
    - Laboratory documentation of cervical infection with N. gonorrhoeae or C. trachoma

Diagnosis
Pelvic Inflammatory Disease (PID)

Differential Diagnosis
- Ectopic pregnancy
- Twisted ovarian cyst
- Ovarian tumor
- Appendicitis
- Abdominal tuberculosis

Treatment (1–5)

Non-pharmacological Management
- Advise sexual abstinence during the course of treatment
- Remove intra uterine device, if present, under antibiotic cover of 24 - 48 hours
- Advise to use Condom

Pharmacological Management
In mild or moderate PID (in the absence of tubo-ovarian abscess), out-patient treatment can be given.
Adults:
Antimicrobial
- Tab. Cefixime 400mg orally, single dose **PLUS**
- Tab. Metronidazole 400 mg orally, twice daily for 14 days **PLUS**
- Cap. Doxycycline, 100 mg orally, twice a day for 14 days

Analgesics
- Tab. Ibuprofen 400 mg orally, three times a day for 3-5 days
- Tab. Ranitidine 150 mg orally , twice daily to prevent gastritis

Special Groups:

Pregnancy: Refer to specialist
Geriatrics: Similar dose as adult

Observe for 3 days. If no improvement (i.e. absence of fever, reduction in abdominal tenderness, reduction in cervical movement, adnexal and uterine tenderness) or if symptoms worsen, refer for inpatient treatment to higher center.

When to Refer

- Severe cases-(tubo-ovarian abscess)
- Suspected ectopic pregnancy
- Recurrent cases
- Non-responsive to treatment (If no improvement within 3 days of start of treatment)

References

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