Pelvic inflammatory disease and chronic pelvic pain

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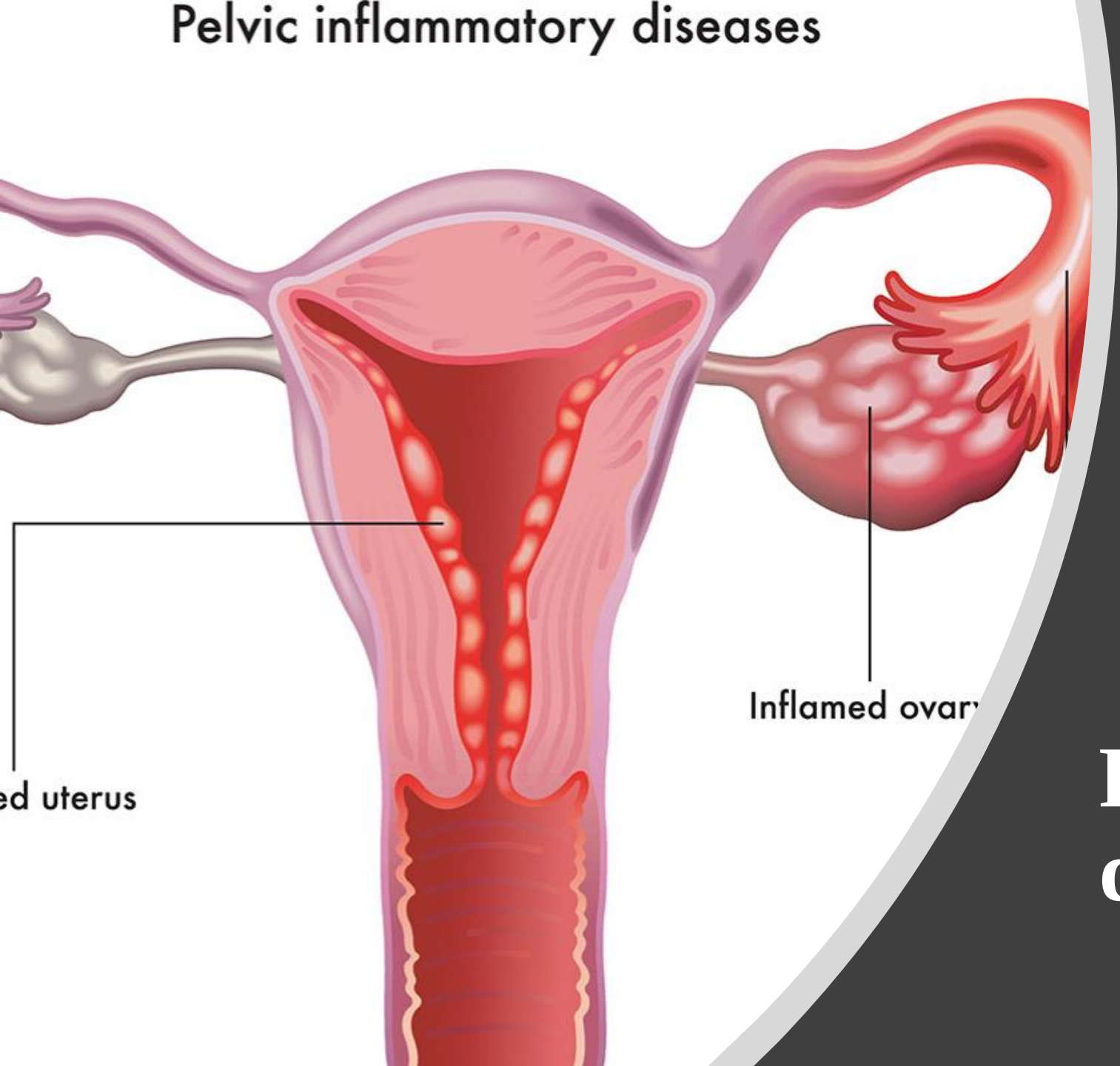


Pelvic inflammatory disease

- Pelvic inflammatory disease (PID) is usually the result of infection ascending from the endocervix causing endometritis, salpingitis, parametritis, oophoritis, tubo-ovarian abcess and/or pelvic peritonitis.

- The incidence of PID is unknown, as many cases go unnoticed until investigations for infertility are performed.

Aetiology

- *Neisseria gonorrhoeae* and *Chlamydia trachomatis* account for a quarter of UK cases.

- *Gardnerella vaginalis,* anaerobes and other organisms commonly found in the vagina likely play a role.

- *Mycoplasma genitalium* has been associated with upper genital tract infection in women and is a very likely cause of PID.

Risk factors

- Young age (<25 years)
- Multiple sexual partners
- Past history of STI (in the patient or her partners)
- Termination of pregnancy
- Insertion of an IUD in the previous six weeks
- Hysterosalpingography
- IVF procedure
- Postpartum endometritis
- Bacterial vaginosis
- New sexual partner (within the previous three months)

Presentation

Symptoms

- Lower abdominal pain, typically bilateral
- Deep dyspareunia
- Abnormal vaginal bleeding, including post coital, inter-menstrual and menorrhagia
- Secondary dysmennorhea
- Abnormal vaginal or cervical discharge, often purulent

Signs

- Lower abdominal tenderness, usually bilateral
- Adnexal tenderness
- Cervical motion tenderness
- Fever (>38°C)

Complications

- The Fitz-Hugh Curtis syndrome comprises right upper quadrant pain associated with perihepatitis which occurs in some women with PID, especially by C. trachomatis.

- A tubo-ovarian abscess should be suspected in patients who are systemically unwell and/or have severe pelvic pain. The palpation of an adnexal mass, or lack of response to therapy, should prompt pelvic imaging with ultrasound, CT or MRI.

Diagnosis

- PID may be symptomatic or asymptomatic.
- Symptoms and signs lack sensitivity and specificity (positive predictive value of a clinical diagnosis is 65-90% compared to laparoscopic diagnosis).
- A positive test for gonorrhoea, chlamydia or M. *genitalium* supports the diagnosis but the absence of infection does not exclude PID.
- An elevated ESR or CRP, or high WBC, also supports the diagnosis but is non-specific and usually only abnormal in moderate or severe PID.
- Ultrasound scanning is of limited value for uncomplicated PID but is helpful if an abscess or hydrosalpix is suspected
- The absence of endocervical or vaginal pus cells on Gram-stained examination of a vaginal smear has a good negative predictive value (95%) for a diagnosis of PID but their presence is non-specific.

Differential diagnosis of lower abdominal pain in a young woman includes:

- Ectopic pregnancy
- Acute appendicitis
- Endometriosis
- Ovarian cyst torsion or rupture
- Urinary tract infection
- Irritable bowel syndrome
- Functional pain

Management

- Delaying treatment is likely to increase the risk of long-term sequelae such as ectopic pregnancy, infertility and pelvic pain. Because of this, and the lack of definitive diagnostic criteria, a low threshold for empiric treatment of PID is recommended. Broad spectrum antibiotic therapy is required to cover a wide variety of aerobic and anaerobic bacteria.

- **Further Investigations:**
  1. Pregnancy test
  2. Screening for sexually transmitted infections including HIV

General advice

- Rest if severe disease.
- Analgesia.
- Intravenous therapy is recommended in more severe clinical disease e.g. pyrexia > 38^{o}C, signs of tubo-ovarian abscess or pelvic peritonitis.
- Avoid unprotected intercourse until patient and partner(s) have completed treatment and follow-up.
- Admission for parenteral therapy, observation and possible surgical intervention should be considered in clinically severe disease, if a surgical emergency cannot be excluded, if no response to oral therapy and in those with a tubo-ovarian abscess or who are pregnant.

Outpatient regimens

- Intramuscular ceftriaxone 1000mg single dose plus
- Oral doxycycline 100mg BD for 14 days plus
- Oral metronidazole 400mg BD for 14 days

Or

- Oral ofloxacin 400mg BD for 14 days plus
- Oral metronidazole 400mg BD for 14 days

Or

- Intramuscular ceftriaxone 1000 mg immediately plus
- Oral azithromycin 1 g/week for 2 weeks

Inpatient regimens

Intravenous therapy should be continued until 24 hours after clinical improvement and then switched to oral.

- Intravenous ceftriaxone 2g daily plus
- Intravenous doxycycline 100mg BD (oral if tolerated)

Followed by

- Oral doxycycline 100mg BD for 14 days plus
- Oral metronidazole 400mg BD for 14 days

Other inpatient regimen

- Intravenous clindamycin 900mg TID plus
- Intravenous gentamicin 2mg/kg loading dose followed by 1.5mg/kg TID

Followed by

- Oral clindamycin 450mg QID to complete 14 days OR oral doxycycline 100mg BD to complete 14 days plus
- Oral metronidazole 400mg BD to complete 14 days

PID in pregnancy

- Pregnant women should ideally receive IV therapy, as PID is associated with higher maternal and fetal morbidity. (However, PID in pregnancy is rare except for septic abortion.) None of the regimens above is of proven safety in this group.

Surgical Management

- Laparoscopy may help early resolution of the disease by dividing adhesions and draining pelvic abscesses

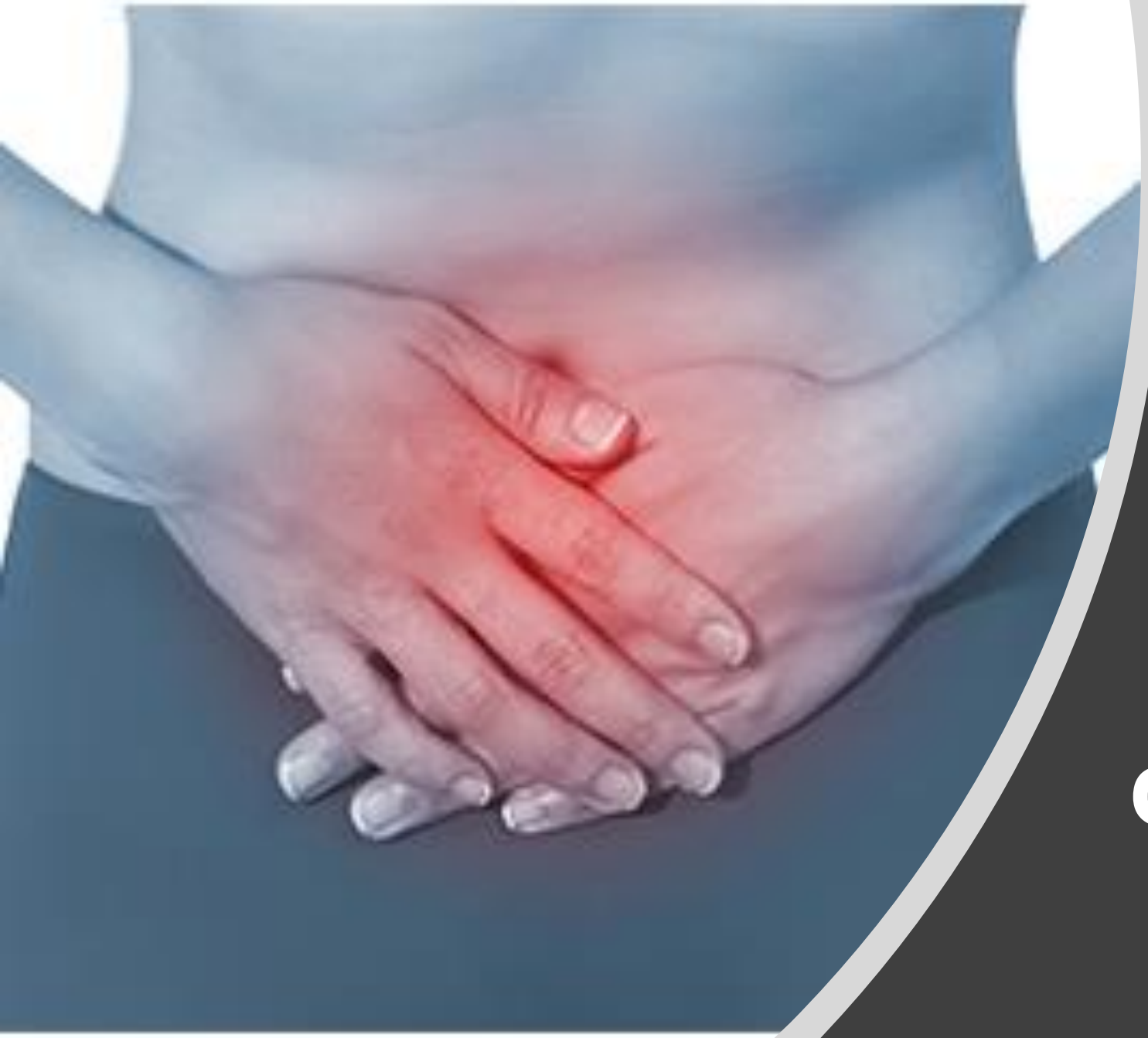
- Ultrasound guided aspiration of pelvic fluid collections is less invasive and may be equally effective

- Perform adhesiolysis in cases of perihepatitis although there is no evidence whether this is superior to using only antibiotic therapy

Follow up

- Review at 72 hours is recommended, particularly if moderate or severe signs.
- Failure to improve suggests the need for further investigation, parenteral therapy and/or surgical intervention.
- Further review 2-4 weeks after therapy may be useful to ensure:

1. Adequate clinical response
2. Compliance with oral antibiotics
3. screening and treatment of sexual contacts
4. Awareness of the significance of PID and its sequelae
5. Repeat pregnancy test, if indicated
6. Repeat testing for gonorrhoea or chlamydia after 2 to 4 weeks in those with persisting symptoms, antibiotic resistance pattern (gonorrhoea only), poor compliance with antibiotics.



Chronic pelvic pain

- Chronic pelvic pain can be defined as intermittent or constant pain in the lower abdomen or pelvis of a woman of at least 6 months in duration, not occurring exclusively with menstruation or intercourse and not associated with pregnancy.

- It is a symptom not a diagnosis.

- Chronic pelvic pain presents in primary care as frequently as migraine or low-back pain and may significantly impact on a woman’s ability to function.

- Affecting perhaps one in six of the adult female population.

Etiology

- There is frequently more than one component to chronic pelvic pain. Assessment should aim to identify contributory factors rather than assign causality to a single pathology.

- At the initial assessment, it may not be possible to identify confidently the cause of the pain.

- Endometriosis and adenomyosis
- Adhesions
- IBS and interstitial cystitis
- Musculoskeletal
- Nerve entrapment
- Psychological and social issues

Assessment of chronic pelvic pain

History

- The initial history should include questions about the pattern of the pain and its association with other problems, such as psychological, bladder and bowel symptoms, and the effect of movement and posture on the pain.

Physical examination

- The assessment should include abdominal and pelvic examination, looking particularly for focal tenderness, enlargement, distortion or tethering, or prolapse. Highly localised trigger points may be identified in the abdominal wall and/or pelvic floor. The sacroiliac joints or the symphysis pubis may also be tender, suggestive of a musculoskeletal origin to the pain.

Investigations

- CBC , urine analysis and culture
- Screening for infection (endocervival swab)
- Transvaginal scanning (TVS) and MRI
- Diagnostic laparoscopy
- CA125

Management

- Regular NSAIDs with or without paracetamol may be particularly useful.
- Women with cyclical pain should be offered a therapeutic trial using hormonal treatment for a period of 3–6 months before having a diagnostic laparoscopy
- Women with IBS should be offered a trial with antispasmodics.
- Nonpharmacological modalities such as transcutaneous nerve stimulation, acupuncture and other complementary therapies may be helpful for some women.
- Women should be offered appropriate analgesia to control their pain even if no other therapeutic manoeuvres are yet to be initiated. If pain is not adequately controlled, consideration should be given to referral to a pain management team or a specialist pelvic pain clinic.

THE END