CONTROLLED DOCUMENT

University Hospitals Birmingham NHS Foundation Trust

# Assessment of women presenting with Lower Abdominal Pain and the Diagnosis and Management of Pelvic Inflammatory Disease (PID) in Sexual Health Clinics

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## 1. Introduction

When assessing women with lower abdominal pain who present to Umbrella Sexual Health Services, the key conditions we are looking to diagnose or exclude are pelvic inflammatory disease (PID) and ectopic pregnancy (EP).

Important differential diagnoses include: acute appendicitis, endometriosis, torsion/rupture of ovarian cyst and urinary tract infection (UTI). Other common causes of lower abdominal pain in young women include irritable bowel syndrome or constipation.

## 2. Diagnosis

### History

In addition to a full sexual history and pregnancy risk assessment, it is important to take a detailed history of the pain and associated symptoms. In particular:

- Site – typically bilateral lower abdominal pain in PID
- Onset – acute vs chronic pain. Acute PID will typically have started within the past 2-3 weeks
- Character – PID usually causes dull aching pain but can produce a sharp pain worse on movement (peritonism) in severe cases.
- Exacerbating factors - sexual intercourse (PID & endometriosis), opening bowels (endometriosis), micturition (UTI, endometriosis), movement (peritonism)
- Timing in relation to menstruation – recurrent pain starting around menstruation may suggest endometriosis
- Abnormal vaginal bleeding - a variety of menstrual disturbances can occur with PID including post-coital bleeding, intermenstrual bleeding and menorrhagia. Abnormal bleeding can occur with EP.
- Deep dyspareunia can occur with PID
- Abnormal vaginal discharge due to a cervical or endometrial infection is associated with PID

- Association with bowel symptoms – PID can cause nausea and vomiting but this is more common with appendicitis.
- Association with urinary symptoms – suggestive of UTI
- Systemic symptoms – fever, sweats can occur in severe PID

2.1 Factors increasing risk of PID

- Age less than or equal to 25years
- New/multiple sexual partners
- Previous STIs
- Recent (within the last 6/52) instrumentation of the uterine cavity including termination of pregnancy (this includes early medical abortion and surgical termination)

2.2 Signs of PID

- Lower abdominal tenderness (usually bilateral or suprapubic)
- Adnexal tenderness on bimanual examination
- Cervical motion tenderness on bimanual examination
- A general abdominal examination is recommended e.g. to exclude renal angle tenderness and peritonism

2.3 Investigations

- Pregnancy test
- Gonorrhoea and chlamydia vulvovaginal nucleic acid amplification test (NAAT) swab (and *Trichomonas* NAAT if abnormal discharge is present)
- A *Mycoplasma genitalium* (MGen) vulvovaginal NAAT swab (N.B. an additional sample is required for this). On Excelicare tick the 'mycoplasma request' box on the investigation screen and write the sample type on the printed test request form because Excelicare cannot currently record the sample type.
- Gonorrhoea culture from cervix - in patients in whom gonococcal PID is strongly suspected (i.e. clinically severe PID or partner with gonorrhoea).
- Syphilis and HIV antibody tests (and Hepatitis B & C where indicated by guidelines)

- Mid-stream urine (MSU) - if urinary symptoms suggest possible UTI
- Temperature, pulse, respiratory rate and blood pressure recordings - in patients who appear systemically unwell (e.g. sweaty, clammy) and/or in whom you suspect ectopic pregnancy, appendicitis and/or peritonism.

Women who have lower abdominal pain with a normal abdominal and bimanual pelvic examination and are not diagnosed with PID should be advised to see their General Practitioner (GP) if the symptoms persist and all investigations are normal.

2.4 Diagnosis of PID

The diagnosis of PID is a clinical judgement based on the history and examination findings. It should be made by a doctor or nurse Non-Medical Prescriber (NMP) who has received the appropriate training in the management of PID. Nurses who have been trained to perform bimanual examinations can examine women with lower abdominal/pelvic pain or dyspareunia but should refer patients with any abnormality found on examination for further assessment by a doctor or a NMP. If further assessment reveals abnormalities that are not felt to be PID, the patient should be discussed with a senior doctor.

Women with suspected PID and a negative pregnancy test who present to a satellite clinic where there is no appropriately trained clinical staff present should be discussed with a senior doctor by telephone. They should be advised to attend Whittall Street Clinic for further assessment and management unless the symptoms are severe enough (see below under treatment) to warrant direct referral to hospital under the care of Gynaecology. If a woman refuses to attend Whittall Street Clinic, she should be advised to attend her GP as soon as possible. The implications of untreated PID should be clearly explained and documented.

2.5 Diagnosis of ectopic pregnancy

Ectopic pregnancy should ALWAYS be considered in the differential diagnosis. If the pregnancy test is positive, refer immediately to Gynaecology/Early Pregnancy Assessment unit at Birmingham Women's Hospital, City Hospital, Good Hope Hospital or Heartlands Hospital, depending on the location of sexual health clinic

and/or patient home address. All external referrals should be discussed with a senior doctor either in person or via telephone. An ambulance may be rarely required if there are concerns about patient safety. If gynaecology referral is clinically indicated but does not occur for any reason, seek immediate senior doctor advice.

## 3. Treatment

Treat PID immediately if it is considered to be the most likely diagnosis based on clinical history and examination.

If the pain is severe and not responding to simple analgesia, the patient should be referred to hospital for gynaecology admission. Patients with tachycardia (above 100 bpm) and/or hypotensive (individual variation but for guidance less than 90/60mmHg) and/or tachypnoeic (respiratory rate above 20bpm) require ambulance transfer. Senior Dr advice should be sought.

### 3.1 Standard treatment

CEFTRIAXONE 1gm IM stat **followed by**
DOXYCYCLINE oral 100mg BD for 14 days **AND**
METRONIDAZOLE oral 400mg BD for 14 days
**If severe penicillin allergy, (e.g. anaphylaxis), speak to senior doctor**.

Alternative treatment:

LEVOFLOXACIN oral 500mg once daily for 14 days (or OFLOXACIN oral 400mg BD for 14 days) **AND**
METRONIDAZOLE oral 400mg BD for 14 days.

If ceftriaxone plus doxycycline cannot be used then the reason should be clearly documented (e.g. intolerance, refusal of an injection). Levofloxacin plus metronidazole can be given after explaining and documenting the potential side-effects of levofloxacin (i.e. uncommon but serious effects on tendons and joints which can be permanent).

### 3.2 Gonorrhoea risk or quinolone allergy/intolerance

If gonorrhoea is a serious consideration either because they are a contact of

gonorrhoea or it is clinically severe PID (significant abdominal pain but not systemically unwell)

CEFTRIAXONE 1gm IM stat **AND**
DOXYCYCLINE oral 100mg BD for 14 days **AND**
METRONIDAZOLE oral 400mg BD for 14 days
**If severe penicillin allergy, (e.g. anaphylaxis), speak to senior doctor**.

3.3 Mycoplasma Genitalium contact or metronidazole allergy/intolerance

If known Mycoplasma Genitalium (MGen) contact with a clinical diagnosis of PID or microbiology confirmation of MGen:

MOXIFLOXACIN oral 400mg OD for 14 days

Explain and document the potential side-effects of moxifloxacin (i.e. uncommon but serious effects on tendons and joints which can be permanent).

3.4 Treatment of PID in Women under 18 years

Quinolone antibiotics (including moxifloxacin, ofloxacin and levofloxacin) should be avoided in women under the age of 18 years. These patients should be treated with IM ceftriaxone followed by doxycycline plus metronidazole using the regimen above.

3.5 Treatment of Mild PID in Breast- feeding Women

CEFTRIAXONE 1gm IM stat **AND**
AZITHROMYCIN 1gm as a single dose on day 1 followed by 500mg once daily for 2 days. This 3-day azithromycin course is **repeated** after 7days

3.6 Treatment of PID in pregnancy

PID is uncommon in pregnancy and it is essential that ectopic pregnancy is excluded. Immediate referral to Gynaecology/ the Early Pregnancy Assessment unit, (Birmingham Women's Hospital, City Hospital, Good Hope Hospital or Heartlands Hospital), is usually required. Please discuss women with a confirmed intrauterine pregnancy and possible PID with a consultant for consideration of inpatient treatment or recommendation of an outpatient treatment regimen.

3.7 Treatment of Women with Intrauterine contraception (IUC)

IUC removal is not routinely required in women with PID but it should be considered if there is no response to treatment (within approximately 72 hours). The decision to remove an IUD in women with PID needs to be balanced against the risk of pregnancy in those women who may have had sex in the preceding 7 days. If a woman diagnosed with pelvic infection wishes to continue to use IUC, appropriate antibiotic treatment can be initiated and she should be reviewed in 3 days. Additional follow-up is required 2–4 weeks after treatment.

Oral emergency contraception may need to be considered in women requesting or having their IUC removed and advice should be provided about avoidance of sex or additional pregnancy prevention precautions. However, please note the possible risk of pregnancy in these women who have had sex in the preceding 7 days. Discuss the case with a senior doctor.

3.8 Treatment of contacts

Contacts need epidemiological treatment even if the index patient's Chlamydia test is negative. Partner details should be obtained and follow-up appointment for partner of index patient should be arranged by the treating clinician.

Preferred option:
DOXYCYCLINE oral 100mg BD 7 days

Alternative option if allergic to Doxycycline:
AZITHROMYCIN oral 1gm OD for 1 day followed by 500mg OD for 2 days

## 4. Advice

No sexual contact for 2 weeks including at least 1 week after partner has completed treatment.
Seek review if not improving on treatment within 3 days, or earlier if pelvic pain worsens (via A&E if the pain is severe)

## 5. Follow Up

3 days if PID is moderate/severe or intrauterine contraceptive device *in situ*.

(See BASHH PID guideline for guidance about intrauterine device removal at www.bashh.org )

Otherwise, review at 2-4 weeks.

## 6. Letters

A letter should be sent to GP with patient's permission for: all patients with suspected PID, ectopic pregnancy and any patients with lower abdominal pain who have been advised to see their GP or referred elsewhere.

## References

1. United Kingdom National Guideline for the Management of Pelvic Inflammatory Disease (2019 Interim Update). Accessed at www.bashh.org July 2022