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Protocol for Treatment of Acute Pelvic Inflammatory Disease (PID)

Introduction and Aim

To provide readily available recommendations on the diagnostic tests, treatment and health promotion principles for effective management of PID based on best available evidence.

Objectives

- 100% of patients being treated for PID should have a vulvovaginal NAATS swab for chlamydia and gonorrhoea and bloods for HIV and Syphilis (STS)
- 100% of patients with severe PID requiring admission, or those not responding to treatment should have a NAATS for mycoplasma genitalium
- 95% of women receive treatment with recommended regimen
- 100% of male contacts are either screened for infection or treated i.e. referral to GUM clinic

Scope

This policy applies to all healthcare professionals in all locations including those with honorary contracts

Equality Health Impact Assessment	*An Equality Health Impact Assessment (EHIA) has not been completed.*
Documents to read alongside this Procedure	*United Kingdom National Guideline for the Management of Pelvic Inflammatory Disease (2019 Interim Update) (BASHH)* *https://www.bashhguidelines.org/media/1217/pid-update-2019.pdf* *Diagnosis and management of tubo-ovarian abscesses (The Obstetrician & Gynaecologist)* *https://obgyn.onlinelibrary.wiley.com/doi/10.1111/tog.12447*
Approved by	*Gynaecology Professional Forum* *Department of Integrated Sexual Health* *Department of Microbiology* *Gynaecology Professional Forum* *Quality & Safety*

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Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Summary of reviews/amendments			
Version Number	**Date of Review Approved**	**Date Published**	**Summary of Amendments**

Protocol for Treatment of Acute Pelvic Inflammatory Disease (PID)

Introduction:
This guideline applies to women requiring treatment for confirmed or suspected acute PID on the Emergency Gynaecology Unit (EGU). The guideline has been produced using BASHH guidance on the management of PID (2019 Interim Update).

Aim:
To provide readily available recommendations on the diagnostic tests, treatment and health promotion principles for effective management of PID based on best available evidence.

Objectives:

- 100% of patients being treated for PID should have a vulvovaginal NAATS swab for chlamydia and gonorrhoea and bloods for HIV and Syphilis (STS)
- 100% of patients with severe PID requiring admission, or those not responding to treatment should have a NAATS for mycoplasma genitalium
- 95% of women receive treatment with recommended regimen
- 100% of male contacts are either screened for infection or treated i.e. referral to GUM clinic

The following signs and symptoms are suggestive of a diagnosis of PID:
• Lower abdominal pain or tenderness (typically bilateral)
• Deep dyspareunia
• Abnormal vaginal bleeding
• Abnormal vaginal or cervical discharge (often purulent)
• Fever (>38^{o}C)
• Cervical motion tenderness (excitation) on bimanual palpation
• Adnexal tenderness +/- adnexal mass on bimanual palpation

Admission to hospital (via EGU) would be appropriate in the following circumstances:

- Surgical emergency cannot be excluded
- Clinically severe disease (pyrexia > 38°C, clinical signs of tubo-ovarian abscess, signs of pelvic peritonitis)
- Tubo-ovarian abscess (TOA)
- PID in pregnancy
- Lack of response to oral therapy

Suggested Investigations:

	Inpatient management (Moderate to severe clinical presentation)	**Outpatient management (Mild to moderate clinical presentation)**
Urine Tests	Pregnancy Test	Pregnancy Test
	Urine dip +/- culture	Urine dip +/- culture
Bloods	FBC, CRP, U&Es, HIV, STS, G&S	HIV, STS
	Blood cultures	
Genital swabs	Vulvovaginal NAAT for chlamydia (CT) and gonorrhoea (GC)	Vulvovaginal NAAT for chlamydia (CT) and gonorrhoea (GC)
	Vulvovaginal NAAT Mycoplasma genitalium (M.Gen) [same yellow top sample tube as CT/GC swab – handwritten request]	
	Endocervical charcoal swab for GC culture	Endocervical charcoal swab for GC culture
	High vaginal swab for MC&S	High vaginal swab for MC&S
Imaging	**Consider additional tests for patients requiring admission** TV ultrasound scan or CTAP (to investigate for tubo-ovarian abscess)	

Test Request Notes:
HIV, Syphilis (STS) serology, Chlamydial and Gonorrhoeal (CT/GC NAATs) can all be ordered under a single test request set – 'CAV STI Screen (Female)'.
Virology – ISH1: standard screen

CT/GC NAATS – is collected with a single yellow top sample tube.
HIV, STS – yellow top blood bottle.

Treatment for Acute PID:
Please note: In cases of confirmed tubo-ovarian abscess, treatment course and duration should be discussed with Microbiology either by phone or during the weekly ward round for inpatients.

Antibiotic choice and advice

- Patients must be told not to drink alcohol whilst on metronidazole
- Doxycycline and quinolones should **not be used** in pregnancy
    - Can be given if there is a pregnancy risk provided pregnancy test is negative
- Ceftriaxone should only be avoided in true penicillin allergy
    - Urticaria, laryngeal oedema, bronchospasm, hypotension or local swelling within 72hrs of penicillin exposure
    - If the rash was not itchy or raised then this is not a true penicillin allergy
    - If the allergy was in childhood consider getting a collateral history
    - Ceftriaxone is a superior drug for the treatment of Gonorrhoea and should be used if possible
- Any allergy queries should be discussed with microbiology.
- Quinolones (ofloxacin, levofloxacin and moxifloxacin) can cause disabling and potentially permanent side-effects involving tendons. Muscles, joints and the nervous system, and are therefore only recommended as second line therapy except for the treatment of M. genitalium associated PID where no alternative therapy is available. They should also be avoided in patients with a high risk of gonococcal infection (e.g. when the patient's partner has gonorrhoea, in clinically severe disease, following sexual contact abroad)

Inpatient Regimens

In more severe cases inpatient antibiotic treatment should be based on intravenous therapy, which should be continued until 24 hours after clinical improvement and followed by oral therapy.

Preferred regimen

- IV Ceftriaxone 2g once daily AND IV or oral if tolerated Doxycycline 100mg twice daily
    - Oral switch to Doxycycline 100mg twice daily and Metronidazole 400mg twice daily for a total of 14 days

Alternative regimen

- IV Clindamycin 900mg three times a day AND IV Gentamicin 6mg/kg once daily – please refer to Microguide for Gentamicin dosing and Therapeutic Drug Monitoring
    - Oral switch to Clindamycin 450mg four times a day and metronidazole 400mg twice daily to complete 14 days **or** Doxycycline 100mg twice daily and metronidazole 400mg twice daily to complete 14 days
- Give adequate analgesia during inpatient stay

Pregnancy Regimen

- IV Ceftriaxone 2g once daily and Erythromycin 500mg four times daily IV or oral AND Metronidazole 500mg three times daily IV or 400mg twice daily oral for a total of 14 days
    - Oral switch to Erythromycin 500mg four times daily and Metronidazole 400mg twice daily to complete 14 days
    - If there are concerns about compliance with erythromycin then Azithromycin is a second line option
        - 1g oral STAT azithromycin given on the first day of treatment and repeated one week later
- Gentamicin should be avoided unless there is no other alternative
- Doxycycline and Quinolones are contraindicated in pregnancy
- All other drugs in the recommended regimes are thought to be safe in pregnancy
- Please contact Microbiology with any queries
- IV therapy is advised in the first instance
- Ensure adequate foetal monitoring appropriate to gestation
- All women diagnosed with PID in pregnancy should be consultant lead care

Outpatient Regimens
In mild or moderate PID (in the absence of a tubo-ovarian abscess) there is no difference in outcome when patients are treated as outpatients or admitted to hospital.

Preferred Regimen
- IM Ceftriaxone 1g STAT dose AND oral Doxycycline 100mg twice daily AND oral Metronidazole 400mg twice daily for 14 days
    - DO NOT give doxycycline and metronidazole without the stat dose of ceftriaxone

Alternative regimen – use with caution
Levofloxacin and moxifloxacin should be avoided in patients who are at high risk of gonococcal PID e.g. when the patient's partner has gonorrhoea, in clinically severe disease, following sexual contact abroad.
- Oral levofloxacin 500mg once daily AND oral metronidazole 400mg twice daily for 14 days
- For patients with known mycoplasma genitalium – moxifloxacin 400mg once daily for 14 days

Patients with an intrauterine device
- The intrauterine device can be left in situ initially but removal should be considered if there is limited clinical improvement after 48-72 hours
- This needs to be balanced against risk of pregnancy if device is removed within 7 days of last sexual intercourse
    - Consider ulipristal acetate (ellaOne) if appropriate
- When removing intrauterine devices please make sure to send the device for culture and sensitivities
    - Type 'IUD' into available tests, the request is under 'Microbial Investigation (Genital)

Surgical Management
- Consider in patients requiring admission
- Timing of procedures will be relative to patient presentation and response to initial therapy
- A decision as to whether surgical intervention is required should be made by a consultant after 24-48 hours of treatment and within 72 hours from admission
- Laparoscopic or US guided drainage of any identified abscesses
- Diagnostic/therapeutic laparoscopy
- Please send a sample of fluid from the abscess to microbiology in a universal container

  - This will provide better results than a charcoal swab of the fluid and would allow for a wider range of sensitivity testing
  - Please document on the request form that the diagnosis is pelvic inflammatory disease
- It is also possible to take a NAAT sample of this fluid using the standard NAAT swab/collection tube
  - This should not replace the vulvovaginal NAAT

Expected clinical evolution

Patients are expected to experience symptomatic improvement within 48-72 hours from initiation of antibiotic therapy. If outpatients have not seen any improvement within this time frame, please suggest contacting the clinical team for consideration of IUD removal, if present (see section above) and Mycoplasma genitalium testing.

If appropriate based on clinical history, antibiotics can be switched to cover M.genitalium pending result: i.e. moxifloxacin can be considered after discussion with a GUM consultant within office hours or Microbiology out of hours.

General advice

- Information leaflet: https://www.rcog.org.uk/for-the-public/browse-all-patient-information-leaflets/acute-pelvic-inflammatory-disease-pid-tests-and-treatment-patient-information-leaflet/
- Recommend rest and simple analgesia as required
- **No sexual intercourse of any kind for duration of antibiotics therapy and until partner has completed treatment**

Follow up

- **It is recommended patients attend for review in EGU at 72 hours for those with moderate or severe symptoms or signs of PID**
  - Assure to document the patients details in the ward communication diary as a ward attender in 3 days' time and that their notes are stored in the TCI draw or the to be reviewed slot
- **Those with mild to moderate symptoms should be reviewed within 4 weeks of treatment.**
  - Assure all women treated for PID are placed in the communication diary for results and review at 3 weeks by the Gynae ward doctor, this can initially be a remote consultation, but if there has not been a complete resolution of symptoms, a physical appointment should be made for further assessment to rule out progression to TOA.

- **All test results are to be reviewed by the ward doctor and positive STI results to be referred to the Department of Sexual Health** for follow up by emailing the secretaries the review & referral form that can be found in Appendix 1
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- The review & referral form is also to be used for review of patients with a negative STI screen, to aid history taking at the time of review and a copy attached to the patients notes.

- **Partner notification**
  - All current partners of women with PID should be contacted by the patient and advised to attend the Department of Sexual Health clinic at the Cardiff Royal Infirmary for testing and empirical treatment as a PID contact (oral Doxycycline 100mg BD for 7 days).
  - Previous sexual partners are advised to seek testing through Frisky wales (https://www.friskywales.org/chlamydia-and-gonorrhoea-home-testing-pilot.html) or another provider
  - CRI contact information: https://cavuhb.nhs.wales/our-services/sexual-health/ Telephone No. 02921 835208. If not local to Cardiff they can attend their local service. They will be offered screening for sexually transmitted infections and treatment as a contact of PID
  - **Advice of partner notification discussion is to be documented in the patients notes and electronic discharge summary**

All Patients with a positive STI screen MUST be referred to the Department of Sexual Health for follow up.

Contacting the Department of Sexual Health:

- For further advice please contact our secretaries on extension 35208 or 35355.
- Email: cav.sha@wales.nhs.uk and doshsecretaries.cav@wales.nhs.uk

Appendix 1.

Copy and complete form and emails to: cav.sha@wales.nhs.uk and doshsecretaries.cav@wales.nhs.uk if positive STI screening results

Print and use as a review aid and attach copy to paper notes.

PID Follow Up & Referral Form				
Patients Name				
DOB				
Hospital Number				
Address				
Date of initiation of treatment				
Tested positive for				
Clinical severity	**Moderate to Severe**		**Mild to Moderate**	
Initial Treatment given	**Inpatient**		**Outpatient**	
	IV Ceftriaxone 2g OD AND IV or oral if tolerated Doxycycline 100mg BD		IM Ceftriaxone 1g STAT dose AND oral Doxycycline 100mg BD AND oral Metronidazole 400mg BD for 14/7	
	IV Clindamycin 900mg TDS AND IV Gentamicin 6mg/kg OD		Levofloxacin 500mg once daily AND oral metronidazole 400mg twice daily for 14 days	
	IV Ceftriaxone 2g OD and Erythromycin 500mg QDS IV or oral AND Metronidazole 500mg TDS IV or 400mg BD orally for a total of 14 days		Moxifloxacin 400mg OD for 14/7	
Is this patient Pregnant? (If yes for consultant lead care)			**Yes**	**No**
Patient advised to contact partner for testing and treatment?			**Yes**	**No**
Partner has been screened and treated?			**Yes**	**No**
Compliant with antibiotics and no sexual contact until completed course?			**Yes**	**No**
Has been given information on PID and is aware of its significance and sequalae			**Yes**	**No**
Adequate clinical response to treatment?			**Yes**	**No**

Example of completed form …

PID Follow Up & Referral Form				
Patients Name	Jane Bloggs			
DOB	23.05.1998			
Hospital Number	U837494			
Address	21, Heath Way, CF39 2US			
Date of initiation of treatment	05.07.2022			
Tested positive for	GC			
Clinical severity	**Moderate to Severe**		**Mild to Moderate**	
			X	
Initial Treatment Given	**Inpatient**		**Outpatient**	
	IV Ceftriaxone 2g OD AND IV or oral if tolerated Doxycycline 100mg BD		IM Ceftriaxone 1g STAT dose AND oral Doxycycline 100mg BD AND oral Metronidazole 400mg BD for 14/7	**X**
	IV Clindamycin 900mg TDS AND IV Gentamicin 6mg/kg OD		Levofloxacin 500mg once daily AND oral metronidazole 400mg twice daily for 14 days	
	IV Ceftriaxone 2g OD and Erythromycin 500mg QDS IV or oral AND Metronidazole 500mg TDS IV or 400mg BD orally for a total of 14 days		Moxifloxacin 400mg OD for 14/7	
Is this patient Pregnant? (If yes for consultant lead care)			**Yes**	**No**
				X
Patient advised to contact partner for testing and treatment?			**Yes**	**No**
			X	
Partner has been screened and treated?			**Yes**	**No**
			X	
Compliant with antibiotics and no sexual contact until completed course?			**Yes**	**No**
			X	
Has been given information on PID and is aware of its significance and sequalae			**Yes**	**No**
			X	
Adequate clinical response to treatment?			**Yes**	**No**
			X	