Diagnosis and management of chronic pelvic pain and PID

Evidence-based medicine vs Experience-based medicine
Diagnosis and management of chronic pelvic pain and PID:

Problems of “evidence-based treatment”

- “No evidence” does not equate to “evidence against”
- Many published trials are conducted in a different population to our patients
RCOG guideline 2005: The initial management of chronic pelvic pain

Possible aetiological factors:
- Endometriosis
- Adhesions
- Irritable bowel syndrome
- Interstitial cystitis
- Musculoskeletal
- Nerve entrapment
- Psychological including CSA

Often multifactorial
RCOG guideline 2005:
The initial management of chronic pelvic pain

Assessment
- History
- Examination (+ swabs if any suspicion of infection)

Investigations
- Laparoscopy: second line if therapeutic interventions fail
- Transvaginal USS: adnexal masses and adenomyosis

Therapeutic options
- COCP or GNRH antagonist for cyclical pain
- Antispasmodics / diet for IBS
- Analgesia / pain management
Case history - EH (W08F1896)

- 7/08 (aged 40)
  - Sudden onset pelvic pain, irregular bleeding, intermenstrual bleeding
  - Periods heavy and painful +++ (previously fine)
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- Investigations:
  - Pelvic USS NAD
  - Colposcopy NAD
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- Investigations:
  - Pelvic USS NAD
  - Colposcopy NAD

- Plan:
  - Flexible hysteroscopy and Mirena
10/08 attended GUM
  - 4 months pelvic pain, irregular bleeding, intermenstrual bleeding
  - Periods heavy and painful +++ (previously fine)
  - Last sex 5 months ago with regular partner of 18 months - previous sexual partner 3 years ago

Examination:
  - Low abdo, uterine, adnexal tenderness, cervical excitation ++

Investigations:
  - Cervical swab Chlamydia positive (PC+/-)

Diagnosis:
  - Chlamydial PID
Diagnosis of pelvic pain: laparoscopy
Diagnosis of PID: Hager’s criteria

- abdominal tenderness
- adnexal tenderness
- cervical excitation
- pus in peritoneal cavity
- pyrexia

plus

- GC from cervix
- raised WCC
- abscess on PV or USS
Clinical diagnosis of PID

Clinical diagnosis based on

- symptoms (pelvic pain and/or dyspareunia, abnormal vaginal bleeding) and
- clinical signs (low abdominal tenderness, uterine tenderness, adnexal and cervical motion tenderness on pelvic examination)
- with no other obvious cause for the pain
- BASHH 2011: “A diagnosis of PID, and empirical antibiotic treatment, should be considered and usually offered in any young (under 25) sexually active woman who has recent onset, bilateral lower abdominal pain associated with local tenderness on bimanual vaginal examination, in whom pregnancy has been excluded”.
Confirmation of clinical diagnosis of PID

- Overall 93/103 women (90%) who returned for follow-up responded to treatment, with complete resolution of symptoms and signs.
- The diagnosis of PID was confirmed in 7 out of the remaining 10 who did not respond to treatment.

<table>
<thead>
<tr>
<th>Laparoscopic findings in the 10 women with persistent pelvic pain:</th>
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<tbody>
<tr>
<td>PID</td>
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<tr>
<td>PID + adhesions</td>
</tr>
<tr>
<td>PID + endometriosis</td>
</tr>
<tr>
<td>Endometriosis</td>
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<tr>
<td>Normal pelvis</td>
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</table>
Diagnosis of PID: Confirmation by response to treatment

- 32 (28%) of women had a previous diagnosis of PID
- Only 2 of these had been given appropriate Rx\(^1\)
- 28/30 patients previously given “inappropriate” Rx subsequently responded to “appropriate” Rx

1“Appropriate treatment”: included a tetracycline and metronidazole, and treatment of their current sexual partner.

Shaded areas indicates that the partner was not treated.
PID: infective causes

- **Gonorrhoea** 2% - 15% *
- **Chlamydia** 11% - 45%
  - We found chlamydia in 21% of women and 40% of partners seen
  - In 10% the partner but not the woman was chlamydia positive
  - In 22% the partner had NSU
- **Anaerobes** 30%
  - We found BV in 24%; 29% of chlamydia pos, 22% of chlamydia neg
- **Mycoplasmas** 25%
- **Streptococcus** 17%
- **None identified** up to 70%

* Most reported studies have been performed in the USA in women with acute PID

J Skapinyecz et al
Planning of empirical antibiotic therapy for women with pelvic inflammatory diseases: a geographical area-specific study (Hungary)
PID: infective causes

None identified in up to 70% - why?

- Many infections are polymicrobial
- Many are associated with normal vaginal flora
- Many of the implicated bacteria (e.g., *Mycoplasma genitalium*) cannot be detected using routine methods
- Most women only have samples taken from the cervix and vagina rather than the upper genital tract
Case history: LM (W04F1968)

- 10/10 (aged 23): attended GUM
  - 2 years (since IUCD fitted) offensive yellow vaginal discharge
  - 7 months low abdominal pain, dyspareunia, PCB
  - periods OK
  - regular boyfriend of 1 year
  - previous sexual partner 18 months ago
  - IUCD removed; using condoms for contraception

- Examination:
  - low abdominal tenderness, cervical excitation +/-
  - uterine and adnexal tenderness ++
Investigations:
- Chlamydia positive from cervix

Diagnosis:
- Chlamydial PID

Treatment:
- doxycycline x 3 weeks, metronidazole x 2 weeks, ceftriaxone im stat
- partner treated

10/10 review:
- Pain-free, no tenderness - discharged
11/10: returned to GUM
- pain recurred within a week of stopping Rx
- retreated with doxycycline, metronidazole, ceftriaxone

1/11, 3/11, 4/11:
- Rx doxycycline, azithromycin intermittently
- pain settled but recurred with a few weeks of stopping

Reviewed 5/11:
- pain improved but plateaued
- periods painful (previously fine)
- start and tricycle OCP
- laparoscopy booked
7/11 diagnostic laparoscopy
- right tube swollen, clubbed fimbrial end
- left tube swollen, tortuous, clubbed fimbrial end
- adhesions left tube to ovary and side wall
- scarring in Pouch of Douglas
- spots of endometriosis left uterosacral ligament

7/11 reviewed
- on pill 2 months (tricycling)
- pain much improved but not keen on taking pill
- considering diathermy to endometriosis
### Initial management of non-acute pelvic pain in women

**Symptoms:** low abdominal pain, deep dyspareunia, painful periods

**History:** gynaecology, obstetric, contraceptive, bladder, bowel, sexual, past medical

<table>
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<tr>
<th><strong>Supports PID</strong></th>
<th><strong>Supports endometriosis</strong></th>
<th><strong>Supports IBS</strong></th>
</tr>
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<tbody>
<tr>
<td>✓ Recent onset of pain</td>
<td>✓ Long duration of pain</td>
<td>✓ Pain relieved with defecation</td>
</tr>
<tr>
<td>✓ Recent partner change</td>
<td>✓ Periods always painful</td>
<td>✓ Change in frequency and appearance of stool (constipation, diarrhoea, or both)</td>
</tr>
<tr>
<td>✓ Onset after invasive procedure, miscarriage or childbirth</td>
<td>✓ Better with pill / Depo-provera</td>
<td>✓ Bloating</td>
</tr>
<tr>
<td>✓ Past history of PID or ectopic pregnancy</td>
<td>✓ Better during pregnancy</td>
<td></td>
</tr>
<tr>
<td>✓ Pain throughout menstrual cycle (although may be worse during period)</td>
<td>✓ Pain usually during period, but may be throughout menstrual cycle</td>
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<tr>
<td>NB These are the commonest causes; other diagnoses are less common but should be considered</td>
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**Examination:** vulvovaginal (speculum), abdominal, bimanual

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<th><strong>Supports IBS</strong></th>
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<tr>
<td>✓ Mucopurulent discharge</td>
<td>✓ Normal</td>
<td>✓ Normal</td>
</tr>
<tr>
<td>✓ Cervical erythema</td>
<td>✓ Low abdominal tenderness</td>
<td>✓ Palpable tender colon</td>
</tr>
<tr>
<td>✓ Cervical contact bleeding</td>
<td>✓ Uterine / adnexal tenderness on bimanual pelvic examination</td>
<td>✓ General tenderness on bimanual examination</td>
</tr>
<tr>
<td>✓ Low abdominal tenderness</td>
<td>✓ No masses palpable</td>
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Initial management of non-acute pelvic pain in women

**Swabs:** high vaginal for MC&S, endocervical for MC&S and Chlamydia NAATs

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<th>Supports IBS</th>
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<tr>
<td>✓ Chlamydia or gonorrhoea</td>
<td>✓ Negative</td>
<td>✓ Negative</td>
</tr>
<tr>
<td>✓ Bacterial vaginosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Cervicitis (pus cells ++++)</td>
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* Absence of infection in the lower genital tract does not exclude PID, but testing is recommended as a positive result strongly supports the diagnosis.

**Therapeutic trial:**

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| Treat according to guidelines (usually 2-3 weeks doxycycline, metronidazole and stat dose of ceftriaxone) plus treat partner | Menstrual suppression for 3-6 mths (tricycle oral contraceptive pill, Depo-provera or Cerazette)  
Better: continue (refer for full fertility Ix if not conceived within 12 months of trying)  
Some response: refer to gynae  
No better: refer to GUM / gynae or trial of menstrual suppression | Manage according to guidelines with dietary review, antispasmodics +/- bulking agents  
Better: continue  
No better: refer to gastroenterology |
| Better: reassure | Better: continue | |
| Some response: refer to GUM | Some response: refer to gynae | |
| No better: refer to GUM / gynae or trial of menstrual suppression | No better: refer to GUM / gynae or trial of antibiotics | |
“It’s always worth a try”: CC

- 2011 (age 17) referred to GUM by gynaecologist
- Endometriosis diagnosed by laparoscopy aged 14
  - Rx diathermy, Prostap, Depo-Provera etc
  - numerous admissions with pain
  - worsened in last year; missed GCSEs, taking opiates
- Reported only one sexual partner
  - unprotected sex with casual partner 12 months previously
- Tender ++ on low abdominal and bimanual examination
- Swabs negative
“Its always worth a try”: CC

- **Diagnosis:**
  - probable endometriosis

- **Treatment:**
  - agreed trial of antibiotics (doxycycline, metronidazole, ceftriaxone)

- **Review at 3 weeks**
  - much improved
  - continued doxycycline

- **Review at 6 weeks**
  - pain free
Case history - SW (W99F0092)
“The patient that changed my practice”

- 1999 (aged 24): seen at fertility clinic
  - 1994 right ectopic - Rx salpingectomy
  - since - lower abdominal pain, deep dyspareunia, heavy, painful periods, IMB and PCB
  - 4 miscarriages
  - husband of 5 years; no other partners

- Investigations:
  - 1995, 96, 97, 98 laparoscopy - PID + adhesions; blocked left tube

- Treatment:
  - adhesionolysis, amoxycillin, cephradine
  - amitriptyline
1/99: referred to GUM for routine screening prior to fertility treatment
- erythema ab igne; low abdomen, uterus and adnexae tender ++
- investigations negative
- husband had asymptomatic Chlamydial urethritis

Treatment:
- doxycycline x 1 month + metronidazole x 1 week (pending adhesiolysis)
- waiting list for psychosexual counsellor
2/99: much improved
  - Continued antibiotics (doxycycline + azithromycin 1g weekly)

6/99: seen in combined pelvic pain clinic
  - Mostly pain free
  - Had sex without pain

6/99: repeat HSG
  - normal uterine cavity
  - no right tube
  - left tube patent
Clinical cure rates in PID

EH Witte et al

A comparison of pefloxacin / metronidazole and doxycycline / metronidazole in the treatment of laparoscopically confirmed acute pelvic inflammatory disease

Results

Clinical cure rates for PID

- Netherlands
- West Dorset GUM '99-'03
- West Dorset GUM 2005

Percentage cure rates:
- Day 3: 0%
- Day 5: 22%
- Day 21: 31%
- Day 14 - 21: 84%
- Discharge: 77%
“Failure of cefoxitin and doxycycline to eradicate endometrial *Mycoplasma genitalium* and the consequence for clinical cure of PID”

Haggerty et al Sex Transm Infec 2008;84:338-342

- *M. genitalium* detected in 15% of women at baseline
- 41% had persistent infection at 30 days
- Associated with short-term treatment failure - histological endometritis and persistent pelvic pain
- *M. genitalium* has variable resistance to tetracyclines, macrolides (other than azithromycin) and quinolones (other than moxifloxacin)
Messages: diagnosis of PID

- Even using a low threshold for diagnosis, the clinical diagnosis of PID in this GUM clinic appears accurate.
- The placebo effect of antibiotic treatment does not appear to be significant.
- Response to appropriate treatment could be an indicator of a “presumptive diagnosis” of PID.
- Laparoscopy is appropriate in those who fail to respond to treatment.
Messages: management of PID

- Current evidence-based guidelines on the management of PID do not address the management of women with subacute or chronic PID
- Our data suggest that clinical cure rates may be substantially increased by continuing antibiotic treatment beyond the recommended guidelines
- Chronic PID may mean inadequately treated PID
Management of chronic pelvic pain (1)

- Therapeutic trial of antibiotics
  - If improved, continue until 100% better or plateaued
  - Doxycycline 3/52 + metronidazole 2/52 + ceftriaxone
  - Then doxycycline + azithromycin
  - Sometimes doxycycline + metronidazole

- Menstrual suppression if periods painful
  - Depo-Provera
  - COCP - Sulak regime
  - Noresthisterone / Provera
  - Prostap (gynaecology)
Management of chronic pelvic pain (2)

- Analgesia / pain management
  - NSAIDS (mefenamic acid)
  - Amitriptyline

- Management of IBS
  - Diet / antispasmodics

- Gynaecology referral
  - USS
  - Laparoscopy - diagnostic / therapeutic
    (NB adhesions rarely cause pain unless surrounding the ovary)
  - Prostap