Dysmenorrhoea - Management

Scenario: Dysmenorrhoea

safe practical clinical answers - *fast*

How should I assess a woman with painful periods?

- **Ask about:**
  - Onset — was the initial onset of symptoms related to the menarche, or was it after several years of painless periods?
  - The timing of pain in relation to the menstrual cycle.
  - Non-gynaecological symptoms that may be associated with primary dysmenorrhoea (for example, nausea, vomiting, migraine, bloating, and emotional symptoms).
  - Other gynaecological symptoms (for example, dyspareunia, vaginal discharge, menorrhagia, intermenstrual bleeding, and postcoital bleeding) that may suggest underlying pathology.
  - Other non-gynaecological symptoms (for example, rectal pain and bleeding) that may suggest underlying pathology.
- **Establish the impact of dysmenorrhoea on the woman's life** (for example, time off work, interference with daily activities).
- **Determine which treatments have already been tried, and their effectiveness.**
- **Perform an abdominal examination in all women.**
- **Perform a pelvic examination,** unless the woman is an adolescent with a typical history of mild-to-moderate dysmenorrhoea who has never been sexually active.
  - Consider taking swabs if the woman is at risk of a sexually transmitted infection. See the CKS topic on Vaginal discharge.
- **Determine whether dysmenorrhoea is likely to be of primary or secondary origin:**
  - Primary dysmenorrhoea:
  - Usually starts 6–12 months after the menarche, once cycles are regular.

- Pain often starts shortly before the onset of menstruation, and lasts for up to 72 hours, improving as the menses progresses.
- Other gynaecological symptoms are not usually present.
- Non-gynaecological symptoms may be present.
- Pelvic examination is normal.
- Secondary dysmenorrhoea:
- Menstrual pain appears after several years of painless periods.
- Pain may persist after menstruation finishes; or may be present throughout the menstrual cycle, but exacerbated by menstruation.
- Other gynaecological symptoms are often present.
- Rectal pain or bleeding may indicate recto-vaginal endometriosis.
- Pelvic examination may be abnormal; however, the absence of abnormal findings does not exclude secondary dysmenorrhoea.

- **Refer urgently for further assessment if red flags are present** including:
- Abnormal cervix on examination.
- Persistent intermenstrual bleeding.
- A palpable abdominal or pelvic mass on examination that is not obviously uterine fibroids nor of gastrointestinal or urological origin.

Common causes of secondary dysmenorrhoea

- **Common causes of secondary dysmenorrhoea** include:
- Endometriosis — cyclical or chronic pelvic pain, that frequently occurs prior to menstruation and may be accompanied by heavy menstrual bleeding and deep dyspareunia.
- Adenomyosis — painful menstruation, that may be accompanied by heavy menstrual bleeding.
- Fibroids (myomas) — lower abdominal pain, frequently accompanied by menorrhagia; a pelvic mass may be identified on examination.

- Endometrial polyps — more common in women older than 50 years of age. Abnormal vaginal bleeding may occur.
- Pelvic inflammatory disease — lower abdominal pain and tenderness that may be accompanied by dyspareunia, abnormal vaginal bleeding, and abnormal vaginal discharge. In acute infection, fever may be present.
- Intrauterine device (IUD) — a history of IUD insertion, usually 3–6 months previously. Pain may be accompanied by longer and heavier periods, often with bleeding or spotting in between periods.

[BASHH, 2005; Society of Obstetricians and Gynaecologists of Canada, 2005; Proctor and Farquhar, 2006]

Basis for recommendation

- Referral criteria for red flags are based on the National Institute for Health and Clinical Excellence guidelines, *Referral for suspected cancer* [NICE, 2005].
- Features that can help distinguish between primary and secondary dysmenorrhoea have been summarized from a consensus guideline on primary dysmenorrhoea [Society of Obstetricians and Gynaecologists of Canada, 2005], and from several reviews of dysmenorrhoea [Rees, 2003; Proctor and Farquhar, 2006].
- The recommendation to ask about rectal pain and bleeding is based on the opinion of an expert reviewer, and supported by a published review on endometriosis [Brosens, 1997].
- The recommendation to perform a pelvic examination is based on a consensus guideline on primary dysmenorrhoea [Society of Obstetricians and Gynaecologists of Canada, 2005].

How do I manage primary dysmenorrhoea?

- **Offer a nonsteroidal anti-inflammatory drug (NSAID) first line** unless NSAIDs are contraindicated.
- Ibuprofen, naproxen, and mefenamic acid are the NSAIDs of choice.
- See the CKS topic on NSAIDs - prescribing issues for further information.
- **Offer paracetamol first line if NSAIDs are contraindicated or not tolerated, or in addition to an NSAID if the response is insufficient.**

- Codeine may be added to paracetamol or an NSAID if the response is insufficient.
- **If the woman does not wish to conceive, consider hormonal contraception as alternative first-line treatment.**
  - Monophasic combined oral contraceptive (COC) preparations containing 30–35 micrograms of ethinylestradiol, and norethisterone, norgestimate, or levonorgestrel, are usually first choice.
  - Oral (Cerazette®), parenteral (Depo-Provera®, Nexplanon® [formerly Implanon®]), and intrauterine progestogen-only (Mirena®) contraceptives may also be considered, after a full discussion of the advantages and disadvantages.
  - See the CKS topic on Contraception for detailed information on prescribing hormonal contraceptives.
- **Combination of an NSAID (or paracetamol, with or without codeine) and hormonal contraception is an option** for women who do not respond to a single treatment.
- **Refer** the woman if her symptoms are severe and not responding to initial treatment, or if there is doubt about the diagnosis.
- **Non-drug measures that may help to reduce pain** include:
  - Local application of heat (e.g. a hot water bottle or heat patch).
  - Transcutaneous electrical nerve stimulation (TENS).
- There is insufficient evidence available to recommend herbal and dietary supplements, acupuncture, exercise, spinal manipulation, or behavioural interventions for the treatment of primary dysmenorrhoea.

Basis for recommendation

Nonsteroidal anti-inflammatory drugs (NSAIDs)

- Evidence from two systematic reviews supports the use of NSAIDs for the management of primary dysmenorrhoea.
  - There is insufficient evidence to indicate whether one NSAID is more effective than another for the treatment of dysmenorrhoea.

- Ibuprofen is considered to have a lower risk of gastrointestinal adverse effects than other NSAIDs. It is licensed for use in the management of dysmenorrhoea in girls and women of all ages [BNF 56, 2008].
- Naproxen is associated with an intermediate risk of gastrointestinal adverse effects. Mefenamic acid, having a short half-life, is likely to be associated with a low-to-intermediate risk. Naproxen is licensed for use in dysmenorrhoea from 16 years of age onwards, and mefenamic acid is licensed for use in acute pain including dysmenorrhoea, from 12 years of age onwards [García Rodríguez and Hernández-Díaz, 2001; BNF 56, 2008].

- Although there is some evidence to support the use of aspirin for dysmenorrhoea, aspirin is not recommended because it has a higher risk of gastrointestinal adverse effects. Aspirin should not be given to children less than 16 years of age because it is associated with Reye's syndrome [CSM, 2002].
- Cyclo-oxygenase-2 (COX-2) inhibitors are not recommended as first-line treatment for dysmenorrhoea, but they may be appropriate for some women (see the CKS topic on NSAIDs - prescribing issues).
- There is some evidence to suggest that the efficacy of COX-2 inhibitors is superior to placebo, and similar to that of NSAIDs.

Paracetamol

- Paracetamol is a widely used alternative to NSAIDs for musculoskeletal pain.
- The evidence on paracetamol for the management of dysmenorrhoea is poor. One small crossover study showed it to be no more effective than placebo at providing pain relief. However, the study was probably underpowered to detect such differences. The same study failed to show a significant difference between aspirin and paracetamol.

Codeine

- CKS found no evidence on the use of codeine in the treatment of dysmenorrhoea, however, the addition of codeine to paracetamol or an NSAID seems reasonable in women who do not experience adequate pain relief from paracetamol or an NSAID alone.

Combined oral contraceptives

- Despite only limited trial evidence on combined oral contraceptives (COCs) for the treatment of primary dysmenorrhoea, they are widely recommended by experts [Society of Obstetricians and Gynaecologists

of Canada, 2005; Proctor and Farquhar, 2006]. The added contraceptive advantage may make them a first-line option for some women.

- A Cochrane review of COCs for the treatment of primary dysmenorrhoea found insufficient evidence to conclude that COCs are effective at relieving pain. The quality of the trials was poor, they are over 25 years old, and they used COCs with higher doses of oestrogen than in currently prescribed products.
- A more recent randomized controlled trial (n = 76) using a COC containing a low dose of oestrogen (20 micrograms) suggested that low-dose COCs may be effective at reducing pain associated with dysmenorrhoea. This is supported by evidence from an observational study.

o COCs containing 20 micrograms of ethinylestradiol are less preferred because they are more likely to cause unscheduled bleeding.

Progestogen-only contraceptives

- Some experts recommend that parenteral progestogens (for example depot medroxyprogesterone acetate) may be considered in the treatment of dysmenorrhea [Society of Obstetricians and Gynaecologists of Canada, 2005; Proctor and Farquhar, 2006].

o Depot medroxyprogesterone acetate works primarily by suppressing ovulation. It can also induce endometrial atrophy. One of its benefits is amenorrhea with a resultant reduction in the incidence of dysmenorrhea.

o The Committee on Safety of Medicines has advised that [BNF 56, 2008]:

o In adolescents, medroxyprogesterone acetate (Depo-Provera®) should only be used when other methods of contraception are inappropriate.

o In all women, the benefits of using medroxyprogesterone acetate for longer than 2 years should be evaluated against the risks.

o In women with risk factors for osteoporosis a method of contraception other than medroxyprogesterone acetate should be considered.

- Evidence from a review of open-label, non-comparative and comparative studies suggests that the etonogestrel subdermal implant, Implanon®, may reduce both the incidence and severity of dysmenorrhoea.

- Implanon® has now been replaced by Nexplanon®. Note that Nexplanon® is bioequivalent to Implanon®. The main differences are that Nexplanon® is radio-opaque, and the insertion technique is different [FSRH, 2010].

- Evidence from observational studies suggests that the progestogen-only pill, Cerazette®, and the levonorgestrel-releasing intrauterine system (LNG-IUS), Mirena®, may be effective at relieving pain associated with menstruation.

- The progestogen only pill (POP) may decrease menstrual flow, and up to 10% of POP users develop amenorrhea. Cerazette® suppresses ovulation and thus has a higher rate of amenorrhoea than other POPs.

- Although it does not suppress ovulation, the LNG-IUS has a local effect on the endometrium, which becomes atrophic and inactive. The effect of this is to reduce blood loss by 74–97%, with 16–35% of users developing amenorrhoea after 1 year of use.

- There is limited evidence that the LNG-IUS may relieve dysmenorrhoea associated with endometriosis [Abou-Setta et al, 2006; Varma et al, 2006].

- Expert reviewers agree that the LNG-IUS is an option for women with dysmenorrhoea who require contraception. It is also an option for those who do not require contraception, particularly older women who have had children and women with heavy menstrual bleeding.

Locally-applied heat

- Evidence from two randomized controlled trials (RCTs) suggests that locally-applied heat is an effective treatment for dysmenorrhoea.

Transcutaneous electrical stimulation (TENS)

- Evidence from a Cochrane review including eight RCTs suggests that high-frequency TENS (pulses delivered between 50 Hz and 120 Hz) reduces pain compared with placebo. The evidence suggests that low-frequency TENS (pulses delivered between 1 Hz and 4 Hz) is less effective than high-frequency TENS and may be no more effective than placebo.

- There is insufficient evidence to draw any conclusions regarding the relative efficacy of TENS and NSAIDs.

- TENS machines cannot be prescribed on the NHS, but can be purchased over-the-counter (costing from around £25).

Herbal and dietary supplements

- The evidence on herbal and dietary supplements is limited by poor quality studies and small sample sizes. When advising women about herbal and dietary supplements for dysmenorrhoea, the uncertainty about long-term efficacy, safety, and interactions should always be considered.
  - There is limited evidence from one RCT undertaken in India that vitamin B_1 may be more effective than placebo in relieving dysmenorrhoea, although the applicability of these results to the UK population is unclear.
  - There is some evidence that both magnesium and vitamin B_6 may provide pain relief; however a disparity of dosing and high drop out rates make it difficult to draw firm conclusions.
  - There is also some evidence that vitamin E may be effective in relieving dysmenorrhoea; however none of the studies reported adverse effects, which have been noted in other studies of vitamin E.
  - Studies of fish oils and the Japanese herbal remedy toki-shakuyaku-san, are too small to draw meaningful conclusions.

Other treatments

- Evidence on other treatments for dysmenorrhoea is too limited by the poor methodological quality of the available studies to make any recommendations for practice.

Referral

- The recommendations for referral are based on expert opinion from the literature [Proctor and Farquhar, 2006] and from expert reviewers.

How do I manage secondary dysmenorrhoea?

- **Refer women with suspected secondary dysmenorrhoea** to a gynaecologist for further investigation.
- **Whilst awaiting referral,** offer a nonsteroidal anti-inflammatory drug (such as ibuprofen, naproxen, or mefenamic acid) or paracetamol (with or without codeine) for pain relief.

Basis for recommendation

- Recommendations regarding when to refer women with dysmenorrhoea are based on a consensus guideline on primary dysmenorrhoea [Society of Obstetricians and Gynaecologists of Canada, 2005] and expert opinion from the literature [Proctor and Farquhar, 2006].

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (http://emc.medicines.org.uk), or the British National Formulary (BNF) (www.bnf.org).

Nonsteroidal anti-inflammatory drugs

Age from 10 years to 11 years 11 months

Ibuprofen s/f susp: 300mg up to three times a day

Ibuprofen 100mg/5ml oral suspension sugar free
Take three 5ml spoonfuls three times a day when required for pain relief. Do not exceed the stated dose.
Supply 300 ml.

Age: from 10 years to 11 years 11 months
NHS cost: £4.64
OTC cost: £11.12
Licensed use: yes

Age from 12 years onwards

Ibuprofen tablets: 200mg to 400mg three to four times a day

Ibuprofen 200mg tablets
Take one or two tablets 3 to 4 times a day when required for pain relief. Do not exceed the stated dose.
Supply 56 tablets.

Age: from 12 years onwards
NHS cost: £1.38
OTC cost: £2.43
Licensed use: yes

Mefenamic acid tablets: 500mg three times a day during periods

Mefenamic acid 500mg tablets
Take one tablet three times a day during your period.
Supply 50 tablets.

Age: from 12 years onwards
NHS cost: £3.24
Licensed use: yes

Age from 16 years onwards

Naproxen tablets: 250mg every 6 to 8 hours during periods

Naproxen 250mg tablets
Take one or two tablets initially, then take one tablet every 6 to 8 hours during your period. Maximum of 5 tablets in 24 hours.
Supply 56 tablets.

Age: from 16 years onwards
NHS cost: £2.58
Licensed use: yes

Paracetamol: use when required

Age from 10 years to 11 years 11 months

Paracetamol s/f susp: 250mg to 500mg up to four times a day

Paracetamol 250mg/5ml oral suspension sugar free
Take one to two 5ml spoonfuls every 4 to 6 hours when required for pain relief. Maximum of 4 doses in 24 hours.
Supply 300 ml.

Age: from 10 years to 11 years 11 months
NHS cost: £1.97
OTC cost: £3.48
Licensed use: yes

Age from 12 years to 15 years 11 months

Paracetamol tablets: 500mg to 1g up to four times a day

Paracetamol 500mg tablets
Take one or two tablets every 4 to 6 hours when required for pain relief. Maximum of 8 tablets in 24 hours.
Supply 50 tablets.

Age: from 12 years to 15 years 11 months
NHS cost: £0.94
OTC cost: £1.66
Licensed use: yes

Age from 16 years onwards

Paracetamol tablets: 1g up to four times a day

Paracetamol 500mg tablets
Take two tablets every 4 to 6 hours when required for pain relief. Maximum of 8 tablets in 24 hours.
Supply 50 tablets.

Age: from 16 years onwards
NHS cost: £0.78
OTC cost: £1.38
Licensed use: yes

Add on codeine if required

Age from 16 years onwards

Add on if severe pain: codeine 30-60mg 4-6 hourly if needed

Codeine 30mg tablets
Take one to two tablets every 4 to 6 hours when required for additional pain relief. Maximum of 8 tablets in 24 hours.
Supply 28 tablets.

Age: from 16 years onwards
NHS cost: £1.19
Licensed use: yes

Combined oral contraceptive

Age from 13 to 50 years

Microgynon 30: levonorgestrel 150mcg+ethinylestradiol 30mcg

Microgynon 30 tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £2.99
Licensed use: yes
Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Ovranette: levonorgestrel 150mcg + ethinylestradiol 30mcg

Ovranette tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £2.29
Licensed use: yes
Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Rigevidon: levonorgestrel 150mcg+ethinylestradiol 30mcg

Rigevidon tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £1.89
Licensed use: yes
Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Levest: levonorgestrel 150mcg + ethinylestradiol 30mcg

Levest 150/30 tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £2.64
Licensed use: yes
Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Brevinor: norethisterone 500mcg + ethinylestradiol 35mcg

Brevinor 500microgram/35microgram tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £1.99
Licensed use: yes
Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Loestrin 30: norethisterone 1.5mg + ethinylestradiol 30mcg

Loestrin 30 tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £3.90
Licensed use: yes
Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Norimin: norethisterone 1mg + ethinylestradiol 35mcg

Norimin 1mg/35microgram tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £2.28
Licensed use: yes
Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Ovysmen: norethisterone 500mcg + ethinylestradiol 35mcg

Ovysmen 500microgram/35microgram tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £1.58
Licensed use: yes

Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a health professional.

Cilest: norgestimate 250mcg + ethinylestradiol 35mcg

Cilest 250microgram / 35microgram tablets
Take one tablet once a day for 21 days. Start the next packet after a 7-day break. See package insert for full instructions.
Supply 63 tablets.

Age: from 13 years to 50 years
NHS cost: £2.99
Licensed use: yes

Patient information: Take the pill at the same time each day. If you forget one or more pills or experience diarrhoea or vomiting and are unsure what to do, seek the advice of a healthcare professional.

Progestogen-only contraceptive

Age from 13 to 60 years

Desogestrel 75micrograms (Cerazette®)

Cerazette 75microgram tablets
Take one tablet once a day. See package insert for full instructions.
Supply 84 tablets.

Age: from 13 years to 60 years
NHS cost: £8.85
Licensed use: yes

Patient information: Take the pill at the same time each day. If you forget a pill, take it as soon as you remember, and the next one at your normal time. If you are more than 12 hours late with any Cerazette pill, it may not work. Take it as soon as you remember, and the next one at your normal time. You must use an extra contraceptive method for the next 2 days (48 hours) or you may become pregnant. You should also do this if you vomit within 2 hours of taking the pill or if you have very severe diarrhoea.

Levonorgestrel 20mcg/24hrs intra-uterine system (Mirena®)

Levonorgestrel 20micrograms/24hours intrauterine system
For insertion into the uterine cavity.
Supply 1 device.

Age: from 13 years to 60 years
NHS cost: £83.16
Licensed use: yes

Patient information: You may experience irregular bleeding for about 6 months after insertion of the device. Seek medical advice if this persists.

Etonogestrel 68mg implant (Nexplanon®)

Etonogestrel 68mg implant
For subdermal implantation.
Supply 1 implant.

Age: from 13 years to 60 years
NHS cost: £90.00
Licensed use: yes

Medroxyprogesterone acetate 150mg syringe (Depo-Provera®)

Medroxyprogesterone 150mg/1ml suspension for injection pre-filled syringes
Give 150mg (1ml) by deep intramuscular injection.
Supply 1 1ml prefilled syringe.

Age: from 13 years to 60 years
NHS cost: £5.01
Licensed use: yes
Patient information: You may experience altered bleeding patterns whilst you are using this injection.