UPDATE
Clinical
Module 1748

This module covers:

- What is meant by dysmenorrhoea, and how it is classified and managed
- The definition of menorrhagia, its causes and treatment options
- The types of amenorrhoea, how it is investigated and the underlying causes of the conditions

May

Clinical: Women's health month

Menopause	May 2
Premenstrual syndrome	May 9*
Troublesome periods	May 16
Postnatal depression	May 23

Practice:

Public health campaigns	May 30*

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Menstrual problems: more than just a pain

Asha Fowells

The menstrual cycle is generally considered a bit annoying but eminently manageable. However, at some point in their lives, most women will view their periods as much more than an inconvenience, perhaps because they experience significant pain or struggle to cope with a flow that seems to have become heavier for no apparent reason. Yet few seek professional help, assuming that their complaints will be dismissed by medical practitioners as 'just something to put up with'. This attitude is flawed, and ignores the fact that problem periods can have a considerable impact on a woman's quality of life, and a knock-on effect on her family and friends.

Dysmenorrhoea

Painful periods (dysmenorrhoea) is considered a symptom rather than a condition in itself, and is thought to affect up to 90 per cent of menstruating women. It presents as painful cramping in the lower abdomen, just before or during menstruation – or both – and may be accompanied by sweating, headache, nausea, vomiting, diarrhoea or constipation. There are two types of dysmenorrhoea:

- **Primary dysmenorrhoea** is thought to be the result of a fall in progesterone levels just before the onset of menstruation, which results in the uterus producing prostaglandins that cause myometrial contractions and ischaemia. It normally presents for the first time soon after the menstrual cycle becomes established
- **Secondary dysmenorrhoea** is the result of underlying pathology and is more common in women over the age of 20 years.

Several risk factors have been identified for dysmenorrhoea, including age (younger women are more likely to report symptoms), smoking,

Few women seek medical help for period pain because they assume their complaints will be dismissed

being overweight or obese, early menarche, nulliparity, depression, stress, family history, and having longer and heavier periods than average. The only factor that seems to reduce the incidence is hormonal contraceptives. The subjective nature of pain means that the impact of dysmenorrhoea is difficult to pinpoint. However, studies show that many women have suffered to such an extent that they have felt unable to go to school or work on at least one occasion, and a minority regularly take time off due to the severity of their symptoms.

Many women choose to self-manage their dysmenorrhoea, using over-the-counter analgesics, heat, abdominal massage, relaxation techniques and transcutaneous electronic nerve stimulation (TENS), and pharmacists and their teams have a valuable role to play in providing advice and information on such interventions. For those seeking medical help, secondary causes should be excluded before diagnosing primary dysmenorrhoea. Signs that secondary dysmenorrhoea may be at play include age, particularly if symptoms have started after several years of painless periods, and other symptoms, both gynaecological and non-gynaecological in origin (see later). An abdominal examination should be conducted to check for fibroids or other large masses, which should be followed up with an ultrasound scan if something abnormal is detected.

If a diagnosis of primary dysmenorrhoea is reached, NSAIDs may be prescribed if OTC analgesics have proved ineffective and there are no contraindications. For women who are not trying to become pregnant, a three- to six-month trial of hormonal contraception can be started, using a monophasic combined oral contraceptive (a product containing 30 to 35mcg ethinylestradiol plus norethisterone, norgestimate or levonorgestrel is usually first-line), oral desogestrel or a progestogen-containing injection, implant or intrauterine system.

Combining the chosen contraceptive with an analgesic may be tried if monotherapy proves inadequate, but if there is no response within a few months the woman should be referred for further tests. Opioids are not recommended because of an absence of evidence of effectiveness. Similarly, there is little to support the use of herbal remedies, supplements, acupuncture and exercise.

If secondary dysmenorrhoea is suspected, investigations that may take place include a pelvic examination, and high vaginal and cervical swabs for sexually transmitted infections. Underlying conditions (and the symptoms and signs that normally feature alongside lower abdominal cramping in each case) can include:

- fibroids – menorrhagia, pelvic mass
- endometriosis – menorrhagia, dyspareunia (painful sexual intercourse), rectal pain or bleeding
- pelvic inflammatory disease – dyspareunia, abnormal vaginal bleeding and discharge, fever
- post-intrauterine device (IUD) insertion – longer and heavier periods for three to six months after insertion, intermenstrual bleeding or spotting.

In all cases, identifying and resolving the cause is the correct form of management.

Menorrhagia

Menstrual flow differs from woman to woman, but for some the bleeding feels so heavy that it has a significant impact on what they can do at certain times of the month. The average blood loss during a period is 30 to 40ml, with 60 to 80ml loss deemed 'heavy' bleeding. However, actual blood loss volumes are somewhat irrelevant; instead it is more pertinent for women to assess whether the amount of menstrual bleeding they are experiencing is normal for them. This is usually apparent from the amount of sanitary protection that is being used – whether more than one form at a time is needed – and whether the woman leaks through to her clothes, which is termed flooding.

Much like dysmenorrhoea, it is difficult to assess the prevalence of menorrhagia because perceptions differ as to what is a 'heavy' period, though studies suggest that around one third of women feel their menstrual cycle falls into that category. The impact can be substantial, sometimes causing women to limit everyday activities – including work and education – and having a negative effect on mood and libido, as well as causing feelings of self-consciousness. Iron deficiency anaemia is not uncommon.

Up to 60 per cent of menorrhagia cases are due to an underlying problem such as polyps, endometriosis, fibroids, IUD use, pelvic inflammatory disease, pelvic infection, polycystic ovarian syndrome, adenomyosis (where endometrial tissue exists within and grows into the muscular wall of the uterus), gynaecological carcinoma, a coagulation disorder (or anticoagulant treatment), hypothyroidism, liver or renal disease and chemotherapy. These causes will either be evident from the woman's medical history or will become apparent when other symptoms – for example, dyspareunia, intermenstrual or postcoital bleeding, dysmenorrhoea, pelvic pain and vaginal discharge – are taken into account.

An abdominal and pelvic examination should be conducted if there is suspicion that an underlying pathology may be to blame, plus a full blood count to rule out anaemia, and an ultrasound scan. Upon referral, tests that may be conducted include tissue biopsy and hysteroscopy. Clearly, if a cause of the menorrhagia is found, it needs addressing.

However, in many cases the cause is not identified, and symptomatic management measures should be used, with the aim of reducing excessive menstrual bleeding, restoring quality of life, and preventing or ▸

treating iron deficiency anaemia. For women who are not planning a pregnancy, insertion of a levonorgestrel-releasing intrauterine system (IUS) for at least a year is recommended, as it has been shown to substantially decrease menstrual bleeding.

For women who prefer to avoid contraceptive measures, options include tranexamic acid – which inhibits fibrinolysis – or the NSAIDs mefenamic acid, ibuprofen or naproxen (the preferred option if dysmenorrhoea is also present). If symptoms do not improve within three menstrual cycles of using an NSAID or tranexamic acid, the treatment should be stopped, but continued use is acceptable as long as the benefits are being felt. Other treatment options include combined oral contraceptives, norethisterone from days five to 26 of the menstrual cycle, or injected long-acting progestogens.

If a pharmacological intervention has failed to provide relief, a second may be trialled. However, surgery is also an option, with endometrial ablation the first choice for women who do not want to conceive in the future. Hysterectomy should be considered only in cases where other treatments have failed, are contraindicated or have been refused by the woman, and the patient is fully informed about the procedure and its impact on her health and wellbeing, including fertility.

Treatments that are not routinely recommended include the pituitary gonadotrophin inhibitor danazol, the haemostatic agent etamsylate, oral progestogens taken during the luteal phase of the menstrual cycle (the two weeks leading up to the onset of menstrual bleeding), and dilatation and curettage (D&C).

Amenorrhoea

While many women joke that they would love their periods to stop tomorrow, in reality the absence of periods – assuming pregnancy, breastfeeding or the menopause are not the reason – is often cause for concern. There are two classifications of amenorrhoea:

- **Primary amenorrhoea** is defined as not starting periods by the age of 16 years in females with normal secondary sexual characteristics (eg breasts, underarm and pubic hair, widening of hips) or, in those who have not developed secondary sexual characteristics, by 14 years. It is relatively uncommon, affecting an estimated 3 to 4 per cent of women of reproductive age
- **Secondary amenorrhoea** refers to cessation of menstruation (for at least three months) in someone who previously had periods, and has an underlying cause.

Primary amenorrhoea needs careful handling, unless the woman in question (and often her parents or carers) is worrying unnecessarily at a young age, in which case reassurance and watchful waiting are usually sufficient. Otherwise, a full medical and family history should be taken (including information about illicit drug use), a pregnancy test conducted, and body mass index calculated in order to determine if hypothalamic function has been impaired due to excessive dieting or exercise. Specialist referral is invariably needed.

If the woman is presenting with secondary amenorrhoea, the cause needs identifying. Again, a full medical history should be taken, a pregnancy test undertaken and family history noted, because early menopause is sometimes familial.

Further investigations are warranted in those who have experienced amenorrhoea for at least three to six months after a previously normal menstrual cycle, six months after stopping a combined oral contraceptive, or nine months after the last dose of an injectable progesterone.

Conditions that may have led to secondary amenorrhoea (and the indicative symptoms or contributing factors that may accompany the absence of periods) include:

- premature ovarian failure – hot flushes, vaginal dryness, previous pelvic radiotherapy and chemotherapy
- polycystic ovarian disease (PCOS) – acne, hirsutism, weight gain
- an eating disorder – weight loss
- hypothalamic dysfunction – weight loss (possibly as a result of excessive dieting or exercise), symptoms of stress or depression, history of unmanaged chronic illness such as heart disease or diabetes
- hyperprolactinaemia, possibly due to use of antidepressants, calcium-channel blockers, omeprazole, radiotherapy or diamorphine, but also as a result of a brain tumour, severe head injury, kidney disease or cirrhosis
- Cushing's syndrome – oedema, weight gain, muscle weakness, fatigue, myalgia, mood swings, excessive thirst, low libido, bruising
- thyroid disease – hyper- and hypothyroidism
- intrauterine adhesions as a consequence of obstetric surgery.

The investigations carried out will be guided by the suspected underlying cause, and may include blood tests for follicle stimulating and luteinising hormones, prolactin level, total testosterone and thyroid stimulating hormone, plus an ultrasound scan of the ovaries.

PCOS, pregnancy, menopause and thyroid disorders are conditions that can cause secondary amenorrhoea and are suitable for management in primary care. All other conditions require referral for full diagnosis plus management of the underlying cause.

One point worth bearing in mind is the increased risk of osteoporosis for women who have experienced secondary amenorrhoea as a consequence of premature ovarian failure, hypothalamic dysfunction or hyperprolactinaemia. While the underlying cause obviously needs treating if possible, these women should have a fracture risk assessment, be checked for vitamin D deficiency and ensure they have an adequate calcium intake. Hormone replacement therapy or combined oral contraceptives may be appropriate for some.

For more information

- Clinical Knowledge Summaries pull together a range of resources to provide information on conditions and their management. Dysmenorrhoea, menorrhagia and amenorrhoea can be viewed at cks.nice.org.uk/dysmenorrhoea, cks.nice.org.uk/menorrhagia and cks.nice.org.uk/amenorrhoea respectively.
- NHS Choices is a good source of information for patients and carers, with period problems covered at nhs.uk/livewell/menstrualcycle/pages/periodproblems.aspx
- Nice has published guidance on menorrhagia, which can be viewed at nice.org.uk/guidance/cg44

Asha Fowells is a pharmacist and freelance health writer

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5 minute test

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Take the 5 Minute Test

1. Dysmenorrhoea is thought to affect up to 90 per cent of menstruating women.
True or false?

2. Secondary dysmenorrhoea is thought to be caused by a fall in progesterone levels just before the onset of menstruation.
True or false?

3. Risk factors for dysmenorrhoea include age, smoking, being overweight or obese, early menarche, nulliparity and depression.
True or false?

4. Opioid analgesics have been found to provide effective pain relief in primary dysmenorrhoea.
True or false?

5. The average blood loss during a period is 60 to 80ml.
True or false?

6. Over 60 per cent of menorrhagia cases have no underlying cause.
True or false?

7. One of the first-line treatments for menorrhagia is insertion of a levonorgestrel-releasing intrauterine system.
True or false?

8. Primary amenorrhoea is defined as not starting periods by the age of 14 years in females who have developed normal secondary sexual characteristics.
True or false?

9. Secondary amenorrhoea causes include PCOS, pregnancy, menopause and thyroid disorders.
True or false?

10. Women with secondary amenorrhoea caused by premature ovarian failure have an increased risk of osteoporosis.
True or false?

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Tips for your CPD entry on menstrual problems

Reflect **What symptoms, as well as pain, may patients with dysmenorrhoea have? How can menorrhagia be treated? What are the causes of primary and secondary amenorrhoea?**

Plan **This article discusses some common menstrual problems. It includes information about the classification and management of dysmenorrhoea, the causes and treatment options for menorrhagia, and the types of amenorrhoea, its investigation and underlying causes.**

Act **Read the Update article and the suggested reading (below), then take the 5 Minute Test (above). Update and Update Plus subscribers can then access answers and a pre-filled CPD logsheet at chemistanddruggist.co.uk/mycpd.**

Read more about dysmenorrhoea on the Patient.co.uk website
tinyurl.com/menstrualproblem1

Find out more about menorrhagia on the Patient.co.uk website
tinyurl.com/menstrualproblem2

Revise your knowledge of amenorrhoea on the Patient.co.uk website
tinyurl.com/menstrualproblem3

Think about advice you could give to women who suffer from menstrual problems, pain relief you would recommend and when to refer.

Evaluate
Are you now confident in your knowledge of some common menstrual problems and their causes? Could you give advice to women about the management of these problems?

EXPERT Q&A

Want to know more? Our women's health expert is on hand to answer any further questions you may have on this month's topic. Email **asktheexpert@updateplus.co.uk**