A patient with heavy periods and PMS seeking contraception

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Although the primary indication for contraceptives is pregnancy prevention, some have noncontraceptive benefits that may help control symptoms associated with the menstrual cycle such as heavy menstrual bleeding. Examining the reasons for contraceptive use is important when discussing options with a patient.

Case scenario

Nerida is 35 years old and travels a great deal for work. She comes to see you because she wants effective oral contraception, but she also wants better control of her periods and to improve her premenstrual bloating and mood symptoms.

Nerida's periods last for six days. On the first day of her period, she passes clots of blood the size of 50-cent pieces. She also needs to change her tampons every two hours for the first couple of days and often uses a pad as well to deal with leakage. Nerida is easily fatigued during this time, which affects her ability to do her work. She has had to take iron supplements for iron deficiency in the past. Nerida's pelvic ultrasound shows no structural abnormality and she has no personal or family history of a bleeding disorder.

Commentary

Nerida is seeking advice for three issues:

- effective contraception
- symptoms consistent with premenstrual syndrome (PMS)
- heavy menstrual bleeding (HMB).

These need separate consideration but can potentially be managed simultaneously.

History and investigations

A detailed medical, sexual and menstrual history is essential, including specific questions about the following:

- nature, duration and severity of the menstrually related symptoms
- presence of any intermenstrual or postcoital bleeding
- impact of symptoms on Nerida's quality of life.

Pregnancy should be considered in all women of reproductive age presenting with a menstrual disorder and there should be a low threshold for carrying out a urine pregnancy test. Nerida's fatigue may be related to iron deficiency as a result of her HMB so it is essential to order a full blood count and measurement of her serum ferritin level. It is also important to determine any risk factors for endometrial malignancy, including obesity (especially in the presence of diabetes and hypertension) and a family history of uterine or colon cancer. Although not relevant in this case, older age (over 45 years) is another risk factor for endometrial malignancy that needs to be considered.

When referring a patient for a transvaginal ultrasound, timing is important. Ideally it should be performed by an experienced practitioner in gynaecological ultrasound between days five and 10 of the menstrual cycle, when ultrasound assessment of the endometrium and any structural uterine abnormalities is optimal. As the timing of the ultrasound was optimal in Nerida's case, it is clinically appropriate to initiate management of her HMB in primary care.

Contraceptive options for heavy menstrual bleeding

The contraceptive options available to Nerida that may also reduce her heavy bleeding include the combined hormonal contraceptive pill, vaginal ring, hormonal intrauterine device (IUD) and depot medroxyprogesterone acetate injection. The hormonal IUD is the most effective pharmacological treatment for HMB because it is associated with a mean reduction in menstrual blood loss of up to 95%. The combined hormonal contraceptive pill is associated with a mean reduction in menstrual blood loss of 69%. Although specific data are lacking on the use of depot medroxyprogesterone acetate for HMB, it is associated with amenorrhoea in up to 47% of women by 12 months.[1]

Nerida prefers an oral contraceptive method and you discuss the different combined hormonal contraceptive pill options with her. Any combined hormonal contraceptive can increase the risk of deep vein thrombosis so patients should be made aware of the symptoms associated with this event. Also, Nerida is advised to take the usual precautions to minimise her chances of a deep vein thrombosis when flying. She also needs to consider the crossing

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of time zones when taking her contraceptive pills while travelling so she does not miss a dose.

Some pills contain progestogens that are more likely to result in light or even no bleeding in the hormone-free break. These include the PBS-listed norethisterone pills and the more expensive non-PBS pills that contain dienogest or nomegestrol acetate in combination with oestradiol in place of ethinyloestradiol (EE). The quadriphasic pill containing oestradiol valerate and dienogest, which has an indication for the management of HMB, has been shown to reduce menstrual blood loss by 64% compared with placebo.[2]

The monophasic oestradiol and nomegestrol valerate pill is associated with an absent withdrawal bleed in about one in three women. Any of the available monophasic pills can be taken continuously without a hormone-free break to reduce the number of withdrawal bleeds and associated symptoms, such as pelvic pain and headache. Traditionally it is common to run three cycles of active pills together before a break. However, the continuous use of active hormonal pills for 12 months or longer is a safe and effective alternative.[3] A pill with 84 consecutive days of EE (30 mcg) and levonorgestrel (150 mcg) followed by seven days of EE (10 mcg) became available in Australia in 2016. It is designed so that women have four withdrawal bleeds per year but it is not listed on the PBS.

Contraceptive options for PMS symptoms

Although the exact cause of Nerida's PMS symptoms is unclear, it is likely to relate to hormonal fluctuations, in particular progesterone levels. Any method of combined hormonal contraception, including combined pills or the vaginal ring, can potentially address these fluctuations. There is some evidence that PMS symptoms, particularly those associated with fluid retention, respond to a combined hormonal pill that contains drospirenone, which is related to spironolactone. This non-PBS listed pill, with 24 active days of pills containing drospirenone (3 mg) and EE (20 mcg) and four days of placebo pills, has an indication for the severe form of PMS called premenstrual dysphoric disorder. However, as you explain to Nerida, evidence is lacking for one particular pill type being superior to any other for managing PMS symptoms.

Outcome

Nerida decides she would like to try a PBS-listed contraceptive pill because they are both cheaper and have a good safety profile regarding deep vein thrombosis. After checking there are no medical contraindications you prescribe a norethisterone and EE combined pill. You advise Nerida that it is safe to skip the inactive pills in order to avoid withdrawal bleeding if she chooses, although this is an 'off label' use of the drug. Also, for women who wish to control symptoms of HMB or PMS but do not require contraception it is acceptable to prescribe pills that are not specifically indicated for these conditions 'off label' (providing there are no contraindications) as their use for these conditions is supported by evidence and expert opinion. Some useful resources are provided in the Box.

USEFUL RESOURCES

- **Australian Commission on Safety and Quality in Health Care.** ***Heavy menstrual bleeding clinical care standard.*** Sydney, NSW: Australian Commission on Safety and Quality in Health Care; 2017. (www.safetyandquality.gov.au/our-work/clinical-care-standards/heavy-menstrual-bleeding/). A short clinician fact sheet is also available. (www.safetyandquality.gov.au/wp-content/uploads/2017/10/Clinician-Fact-Sheet.pdf).
- **Faculty of Reproductive and Sexual Healthcare (FRSH), Royal College of Obstetricians & Gynaecologists.** ***Clinical guidance: combined hormonal contraception.*** London, UK: FRSH; 2019. (www.fsrh.org/standards-and-guidance/documents/combined-hormonal-contraception/).
- **Family Planning NSW, Family Planning Victoria and True Relationships and Reproductive Health.** ***Contraception. An Australian clinical practice handbook,*** 4th ed. Ashfield, NSW: Family Planning NSW; 2016.
- **National Institute for Health and Care Excellence (NICE).** ***Heavy menstrual bleeding: assessment and management.*** London, UK: NICE; 2018. (www.nice.org.uk/guidance/ng88).
- **Family planning organisations.** Patient factsheets from organisations including Family Planning NSW. (www.fpnsw.org.au).

Nerida's last menstrual period began three days ago and you advise her that the pill will be immediately effective as a contraceptive if she starts it between days one and five of her menstrual cycle. She is delighted to know that her next episode of bleeding is unlikely to be as heavy as her previous periods. Nerida is placed on recall to review her HMB in six months to ensure that her symptoms are improving, with advice to return earlier if needed. MT

References

1. Matteson KA, Rahn DD, Wheeler TL 2nd, et al; Society of Gynecologic Surgeons Systematic Review Group. Nonsurgical management of heavy menstrual bleeding: a systematic review. Obstet Gynecol 2013; 121: 632-643.
2. Jensen JT, Parke S, Mellinger U, Machlitt A, Fraser IS. Effective treatment of heavy menstrual bleeding with estradiol valerate and dienogest: a randomized controlled trial. Obstet Gynecol 2011; 117: 777-787.
3. Edelman A, Micks E, Gallo MF, Jensen JT, Grimes DA. Continuous or extended cycle vs. cyclic use of combined hormonal contraceptives for contraception. Cochrane Database Syst Rev 2014; (7): CD004695.

Further reading

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Fraser IS, Parke S, Mellinger U, Machlitt A, Serrani M, Jensen J. Effective treatment of heavy and/or prolonged menstrual bleeding without organic cause: pooled analysis of two multinational, randomised, double-blind, placebo-controlled trials of oestradiol valerate and dienogest. Eur J Contracept Reprod Health Care 2011; 16: 258-269.

Weisberg E, McGeehan K, Hangan J, Fraser IS. Potentially effective therapy of heavy menstrual bleeding with an oestradiol-nomegestrol acetate oral contraceptive: a pilot study. Pilot Feasibility Stud 2017; 3: 18.

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