**Contraception meets HRT:**
seeking optimal management of the perimenopause

**PERIMENOPAUSAL PRESENTATIONS**
Perimenopausal patients present with vasomotor, psychological, and urological symptoms as well as disturbance of their bleeding pattern. Pregnancy risk is not always something they are aware of and consequently can sometimes be overlooked. Similarities and overlap exist between products used for contraception and those used as hormone replacement, but as yet no product is licensed for both.

**MISMATCH OF DEFINITIONS**
A complicating factor in these consultations is that when clinicians use the word ‘menopause’ they mean cessation of ovulation, whereas patients use the same word to describe the symptoms they are suffering (Box 1). Patients often recount ‘early menopause’ in family members, but are not describing early cessation of menses, indeed the actual date of final menstrual period (FMP) is often unknown, as many women have been taking cyclical hormone replacement therapy (HRT) or hormonal contraception. Clarification of these definitions at an early stage in the consultation is important, as genuine early or premature menopause is a risk factor for osteoporosis, heart disease, and dementia; these patients need to understand the benefits of HRT up until at least the age of 50 years.

**SEX IN THE OVER 40s**
Mid-40s is the peak age for divorce in the UK, often corresponding to renewed interest in sexual relationships. In some respects midlife has become the new teenage and in both age groups a higher than average proportion of pregnancies end in abortion. Our role therefore is to emphasise that the onset of perimenopausal symptoms does not herald an end to fertility.

**CESSATION OF CONTRACEPTIONS**
A woman can be regarded as safe from pregnancy risk a year after her FMP if she was >50 years, or 2 years after her FMP if she was <50 years. This is useful only if she was using a non-hormonal method of contraception, as with hormonal methods she cannot be sure if her amenorrhoea was natural or method induced. Current recommendation is for women using combined methods or the Depo-Provera® (Pfizer) injection to change to an alternative method at age 50 years, but the other methods of contraception do not have any upper age restriction.

**BLOOD TESTS**
Follicle stimulating hormone (FSH) levels are useful in women wishing to cease progestogen-only contraception (POC) (but not oestrogen-containing products): two FSH levels ≥30 iu/l, 6 weeks apart show a woman is post-menopausal and she then needs to wait 1 year before safely stopping contraception.

FSH levels are also indicated in women who have ceased menstruating aged <45 years, so that management of premature menopause can be offered. Testing FSH levels in women who are still menstruating is unhelpful as postmenopausal FSH levels only occur 1 year after menopause.

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**Box 1. Medical definitions**

**Perimenopause/ climacteric**
- Phase of life, inverse of puberty
- From onset of symptoms/menstrual irregularity until 1 year after menopause
- Average age 45–55 years, timing of onset and duration very variable

**Menopause**
- Single point in time
- Final menstrual period (FMP)
- Average age 52 years in UK (80% by 54 years)
- Diagnosed in retrospect 2 years after FMP if <50 years; 1 year if >50 years

**Postmenopause**
- The rest of a woman’s life after FMP, often one-third or potentially half of her life

**Premature menopause**
- FMP <40 years or 45 years

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menstruating, however, is both unhelpful and misleading as the levels can vary markedly even on a daily basis. Whether to offer HRT or not should be based on symptoms; FSH levels do not assist with this decision and if raised may give false reassurance regarding pregnancy risk.

**Management Options**

HRT offers excellent control of perimenopausal symptoms, but it can exacerbate bleeding problems and does not offer contraception. Management options to address all three problems include: combined hormonal contraception (CHC), Mirena® [Bayer] plus oestrogen replacement (ERT); or HRT plus POC.

**Combined Hormonal Contraception**

CHC is a safe, effective alternative to HRT in healthy, non-smoking, perimenopausal women and offers additional benefits, including: control over bleeding, contraception, and protection against ovarian and uterine cancers.

Original CHC products contained >100 µg of ethinylestradiol (EE), whereas products today contain between 15 µg and 35 µg. The lowest dose is provided by the vaginal ring [NuvaRing® [MSD]], which also offers the greatest degree of bleeding control.

Since the 1960s CHC has been designed to offer 21 treatment days, followed by a 7-day hormone-free interval (HFI), giving a false 28-day cycle. This can cause problems with longer bleeds, mood swings, headaches, and in perimenopausal women, exacerbation of vasomotor symptoms in the HFI. More favourable regimens include offering fewer or shorter HFIs. ‘Tricycling’ or running three strips of pills consecutively provides just five HFIs/bleeds annually, rather than 13. Shorter HFIs are available with the newest pills: Qlaira® [2-day [Bayer]] and Zoely® [4-day [MSD]]. These pills also contain estradiol (E2) rather than EE, just like HRT.

CHC however, unlike Mirena or HRT, is contraindicated in certain women: smokers >35 years, those with hypertension, focal migraine [transdermal HRT recommended], and complicated diabetes.

**Mirena plus ERT**

Mirena is licensed for contraception, heavy menstrual bleeding (HMB), and as the progestogen element of HRT. Amenorrhoea or decreased bleeding is achieved in 65% of Mirena users in the first year of use. Mirena has been shown to be more effective in reversing anaemia than CHC and its increasing use in the treatment of heavy menstrual bleeding has led to a significant decrease in hysterectomies in the UK. Mirena plus ERT provide the only form of continuous combined (potentially bleed-free) HRT licensed in perimenopausal women.

An area for possible confusion for Mirena users is the timing of removal or replacement. If fitted at the age of <45 years in a woman requiring contraception the Mirena should be changed after 5 years; the Faculty of Sexual and Reproductive Healthcare [FSRH] supports extended use if fitted at >45 years. If fitted for HMB alone, the device needs only to be changed if unacceptable bleeding returns. If, however, the device is being used as the progestogen element of HRT (for endometrial protection) it has to be changed at 5 years [licence states 4 years, but FSRH support 5 years] regardless of bleeding or contraceptive need. It is important, therefore, to ascertain at each follow-up visit whether contraceptive need has changed (for example if the woman has a new partner without vasectomy); or if ERT has been commenced [Figure 1].

**HRT plus POC**

Some experts advocate that all POC (including pills and implant) can be used in the same manner as the Mirena, as endometrial protection alongside ERT; however, this is not currently accepted practice in the UK. FSRH recommend that a progestogen-containing HRT should be used alongside all POC.
**CONCLUSION**

Most women experience perimenopausal symptoms (70%), classically between the ages of 45 and 55 years, and many seek help. These symptoms along with chaotic bleeding can be embarrassing, and cause sleep deprivation, lethargy, and low mood in women, often at the busiest time of their working lives; these are the women for whom HRT is prescribed in the UK. As most are also sexually active, we need to address this triad of needs holistically, offering those who have not undergone hysterectomy or sterilisation help across all three parameters: vasomotor symptoms, dysfunctional bleeding, and risk of pregnancy.

Mirena plus ERT is the gold standard, offering potentially bleed-free, contraceptive HRT with no upper age limit. For those <50 years who decline a Mirena and who have no contraindications, CHC may offer the best all-round treatment option, providing important lifestyle benefits as well as long-term health benefits. If neither Mirena nor CHC is suitable, our task is to find an HRT product that suits and to remember to prescribe a POC alongside.

**REFERENCES**


**Competing interests**

Jenny Brotherston has received sponsorship for educational meetings from pharmaceutical companies including Bayer Schering Pharma (BSP) and Merck, Sharp Dohme (MSD).

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