

Contraception SET day

May 2026: cases

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Plan

- **Case one:** Meningioma and contraceptive choices
- **Case two:** Secondary amenorrhoea and contraceptive choices
- **Case three:** Pre-menstrual syndrome and contraceptive choices

Case 1

- 34 year old female
- Attended to discuss contraception
- History of meningioma , diagnosed 6 years ago following chronic headaches
 - Surgery in 4 years ago and radiotherapy last year, having yearly MRI follow up
- Ongoing headaches ?migraines with aura ? medication overuse
- Recommendation from neurology to stop Depo-provera due to ?medication overuse headaches
- The patient liked the depo-provera as was amenorrhoeic, prior to this had painful and heavy periods

Meningioma

- Uncommon, and predominantly benign brain tumour
- Slow growing
- Symptoms result of space occupying lesions: changes in vision, hearing loss or tinnitus, loss of smell, headaches, memory loss, seizures, or weakness in extremities
- Annual incidence of 6 cases per 100,000 in the general population.
- Main risk factors: advanced age , being female.
- Median age at diagnosis 66 years old.
- Role of sex hormones?
 - o 70% express progesterone receptors
 - o 30% express estrogen receptors

CoSRH new evidence and statements on meningioma

The following progestogens have been found to have an association with meningioma:

- **Cyproterone acetate:** Co-cyprindiol/Dianette (*cyproterone acetate 2mg with ethinylestradiol*, used for treatment of acne and hirsutism)
- **Nomegestrol acetate:** Zoely (*Estradiol 1.5mg, Nomogestrel acetate 2.5mg*, newer combined hormonal contraception)
- **Medroxyprogesterone acetate** (depo-provera injectable)
- **Desogestrel**

To date, no association has been found between the use of levonorgestrel and meningioma.



Meningioma brain tumours and the contraceptive injection medroxyprogesterone acetate (brand names include Depo Provera, Sayana Press)¹

Evidence

What is the situation?

A comprehensive French study published in the *British Medical Journal* in March 2024 analysed data from over 108,000 women, including 18,000 who had undergone surgery for meningiomas. The findings revealed that women who used medroxyprogesterone acetate for at least 12 months had a 5.6-fold increased risk of developing a meningioma compared to non-users. This elevated risk was also observed with other high-dose progestogens like medrogestone and promegestone. However, no increased risk was found with lower-dose progestogens such as dydrogesterone or levonorgestrel used by devices in the uterus (intrauterine).

While the risk is considered small, it is more significant with prolonged use and high doses. It is important to remember too that there are benefits of medroxyprogesterone acetate.

Risks and benefits

Risks

Potential increased risk of developing meningioma.

Higher doses – risk appears to increase with the duration of use and dosage.

Unknown mechanisms – the exact mechanism by which medroxyprogesterone acetate might increase meningioma risk is not fully understood but is thought to involve hormonal effects.

Benefits

Medroxyprogesterone acetate is an effective and long-acting contraceptive; having a baby is not without risk:

- It may reduce menstrual cramps and pain.
- It may lower the risk of endometrial cancer.
- It may lighten bleeding.

How to counsel patients?

Take a full medical history to check UKMEC eligibility

What are the patient priorities?

If history of meningioma:

Cyproterone acetate, Norgestrol acetate, Medroxyprogesterone acetate and Desogestrel are not advised in those with a history of meningioma

No evidence indicative of a link with other hormonal preparations

Meningioma is a sex hormone sensitive tumour

Should we counsel on risk if no history of meningioma?

My patient

- Was keen to avoid oral dose hormonal options due to ?medication overuse headaches
- Prior to Depo-provera had heavy and painful periods
- Was sexually active, pregnancy not desired and wanted a reliable method.
- Opted to use LNG IUD, we arranged a Mirena coil insertion



Case 2

- 20-year-old female
- Attended to discuss contraception
- Past medical history of ADHD and low BMI
- BMI: 15.4, under support of a dietician for distractibility/aversion around eating but never diagnosed with a formal eating disorder.
- BP 80/40
- Started menarche age 16, went quickly onto CHC, but stopped this 10 months ago due to difficulty accessing Evra patch
- No bleed since stopping Evra patch

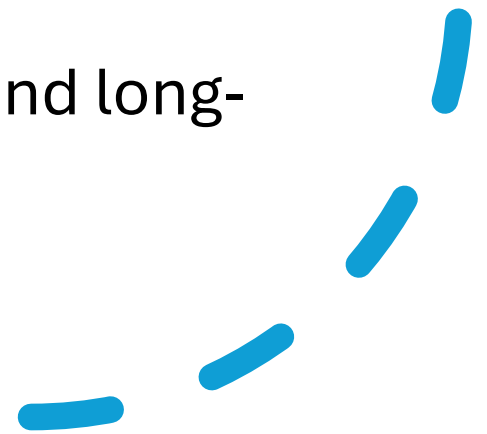
Case 2 (cont)

Sexually active , using condoms reliably

On direct questioning about hypo-oestrogenic symptoms:

- Vague history of occ **night sweats** and **hot flushes**.
- **Brain fog**, but hard to tell due to ADHD symptoms.
- No **vaginal dryness/soreness**

Tearful and worried about fertility and long-term health.



Secondary amenorrhoea: CKS guidelines

- Take a full history
- Examination
- Preliminary investigations (in primary care):
 - Urinary pregnancy test
 - FSH and LH, Oestradiol, Prolactin, Total testosterone
 - TSH
 - Consider ultrasound scan (if PCOS suspected).
 - Other investigations as suggested by clinical findings.

Common causes of secondary amenorrhoea

State	Oestradiol	FSH	LH	Prolactin	Testosterone
Hyperprolactinaemia	Low	Normal/low	Normal/low	High	Normal
Polycystic ovary syndrome <i>***Polyendocrine Metabolic Ovarian Syndrome</i>	Normal/low/high	Normal	Normal/slightly increased Elevated LH: FSH ratio may support diagnosis	Normal/slightly increased (in up to 52%)	Normal/moderately increased Free androgen index increased
Premature ovarian insufficiency	Low	High	High	Normal	Normal/low
Functional hypothalamic (weight loss, excessive exercise, or stress)	Low	Normal/low	Normal/low	Normal/low	Normal/low

Secondary amenorrhoea from low BMI: functional hypothalamic

- The Hypothalamic-Pituitary-Ovarian will switch off during acute stress/illness
 - low BMI/low body fat, high levels exercise, chronic stress
- Not possible to predict when ovulation and an unintended pregnancy may occur, need to consider contraception



Zoom out

The Faculty of Sexual & Reproductive
Healthcare of the Royal College
of Obstetricians & Gynaecologists

FSRH CEU Statement: Contraception for Women with Eating Disorders

15th June 2018 (updated 10th May 2021)

Health considerations for this group

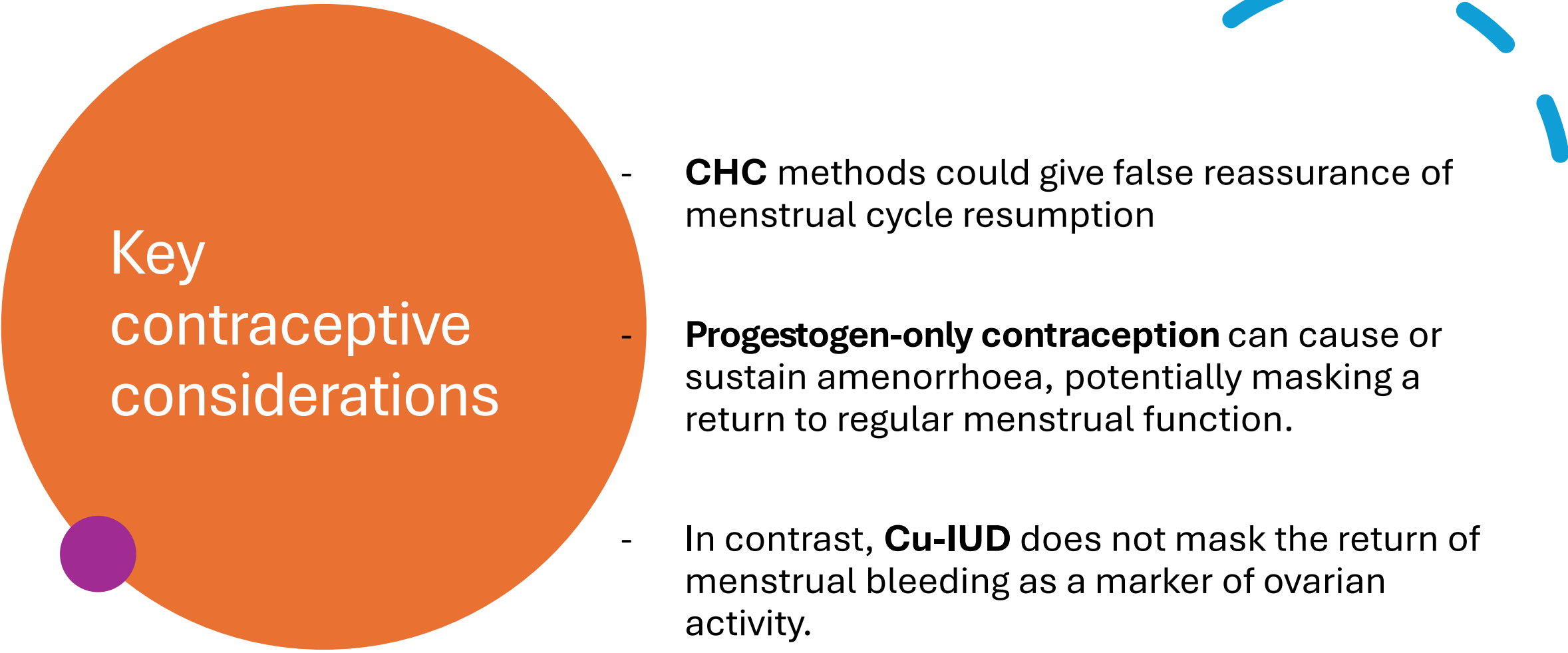
Bone health

Cardiovascular health

Contraception / Fertility

Relief of symptoms

Psychological support



Key contraceptive considerations

- **CHC** methods could give false reassurance of menstrual cycle resumption
- **Progestogen-only contraception** can cause or sustain amenorrhoea, potentially masking a return to regular menstrual function.
- In contrast, **Cu-IUD** does not mask the return of menstrual bleeding as a marker of ovarian activity.

A large orange circle is positioned on the left side of the slide, partially cut off by the edge. It contains the text 'Key contraceptive considerations' in white.

Key contraceptive considerations

- Some evidence that depo-provera is associated with weight gain.
 - No evidence that other hormonal contraception causes weight gain.
 - Vomiting and laxative misuse might affect absorption of oral methods
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Contraception & Bone Mineral Density



Estimated:

>90% of women with anorexia demonstrate **osteopenia**

Almost 40% demonstrate **osteoporosis**

*at one or more
skeletal sites*

COC alone is not effective in increasing BMD.

(limited evidence for oestradiol COC and HRT)

- possible that estrogen treatment alone cannot correct the multiple factors (nutritional, other hormonal) contributing to loss of BMD.
- Important that women are not falsely reassured that use of CHC protects against osteoporosis in the absence of weight gain.

Bone mineral density (cont)

- Depo-provera --> small reduction in BMD, largely recovered when discontinued
- Use of DMPA by women with low BMI requires careful informed discussion



What about LARC?



- Implant



Little subcutaneous tissue, could theoretically increase the risk of deep **implant** insertion

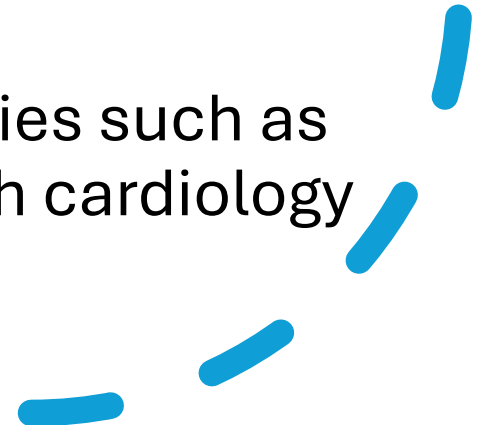
- IUCD

Atrophic uterus with short uterine cavity?

Consider smaller IUCD devices.

A pre-existing slow pulse or low blood pressure
? Increased risk vasovagal episode during or after IUCD fitting

Consider other cardiac abnormalities such as prolonged QT, UKMEC 3, (liaise with cardiology for best practice)



Not possible to predict when ovulation and an unintended pregnancy may occur.

Increased risk of adverse pregnancy outcomes: fetal growth restriction, prematurity.

If wanting to prevent pregnancy, contraception is important

Appendix I: Considerations for contraceptive methods

Contraceptive Method	Advantages	Disadvantages
Progestogen-only Implant	▶ High effectiveness ▶ Unaffected by vomiting or laxatives	▶ May be associated with body changes (e.g. breast tenderness/pain, weight gain) ▶ Infrequent bleeding or amenorrhoea may mask eating disorder recovery
Levonorgestrel Intrauterine System (LNG-IUS)	▶ High effectiveness ▶ Unaffected by vomiting or laxatives	▶ May be associated with body changes ▶ Infrequent bleeding or amenorrhoea may mask eating disorder recovery ▶ Short uterine cavity may necessitate small device
Copper Intrauterine Device (Cu-IUD)	▶ High effectiveness ▶ Unaffected by vomiting or laxatives ▶ Does not cause amenorrhoea and therefore will not mask eating disorder recovery	▶ Short uterine cavity may necessitate small device
Progestogen-only Injectable (DMPA)	▶ High effectiveness ▶ Unaffected by vomiting or laxatives	▶ Associated with weight gain ▶ Associated with reduced bone mineral density (BMD) ▶ Infrequent bleeding or amenorrhoea may mask eating disorder recovery
Progestogen-only Pills (POP)	▶ Medium effectiveness	▶ Can be affected by vomiting or laxatives ▶ May be associated with body changes ▶ Infrequent bleeding or amenorrhoea may mask eating disorder recovery
Combined Hormonal Contraception (CHC), includes pills (COC), patch and ring	▶ Medium effectiveness ▶ Patch and ring are unaffected by vomiting or laxatives	▶ COC can be affected by vomiting or laxatives ▶ May be associated with body changes ▶ Cyclic bleeding may mask eating disorder recovery

Case 2 summary

- Contraception is one part of support: consider impacts on hormonal profiling, so ideally this needs to be done first.
- Need a diagnosis, specialist input
- Dietician support/ lifestyle measures (eg. reduce exercise/ stress/weight gain)

Endocrine treatment strategies for functional hypothalamic amenorrhoea may include:

- E2 replacement
- Progesterone replacement
- Monitoring- symptoms, bone density DEXA screening, E2 levels

My patient

- Chose to go back onto Evra patch
- I wrote to her and her GP suggests she has hormonal profiling (would have to temporarily stop patch) +/- onward referral for specialist support



Case 3

- 30-year-old female
- Attended to discuss contraception
- Past medical history:
 - **Premenstrual syndrome**
 - Autism spectrum disorder
 - Chronic joint pains
 - PTSD
- Smokes 10/day
- Periods regular but heavy, cycles 5/28



Case 3

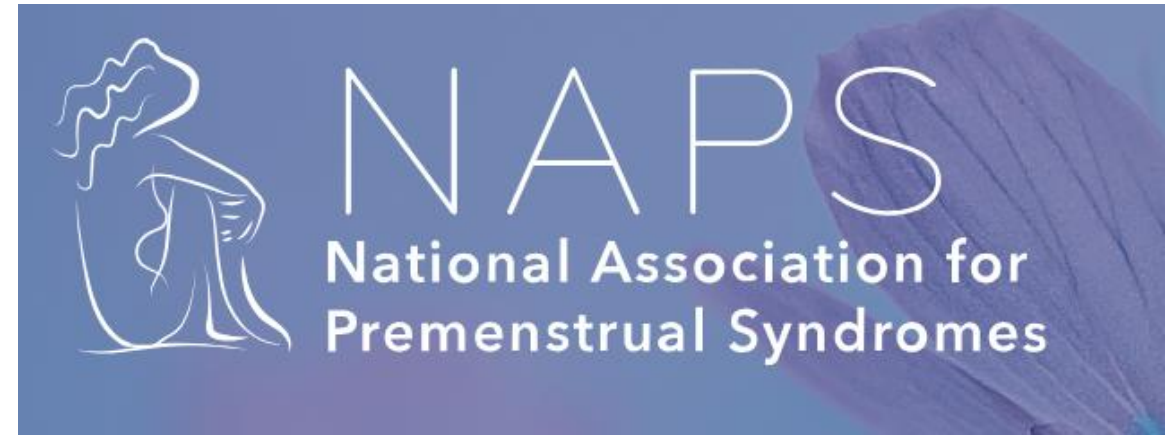
- Taking sertraline (12.5/25mg) for PMS. Struggling with heartburn so dose recently reduced.
- Self-medicating joint pains with cannabis, recently stopped: ↑ joint pains, but now sleeping better.
- Recognises:
 - cycles of worsened joint pain → feels worse in herself → does less exercise → PMS symptoms get worse
 - when does more regular exercise PMS symptoms improve



Case 3

- Sexually active: not using reliable contraception
 - Does not want to become pregnant
 - Doesn't like taking tablets
-
- Previously seen gynaecology to discuss PMS and options

PMS



- 40% women experience symptoms of PMS, of these 5–8% suffer from severe PMS
- Aetiology uncertain
- Symptoms are nonspecific and recur in ovulatory cycles.
 - Must be present during the luteal phase and abate as menstruation begins, followed by a symptom-free week.
 - Symptom diary over at least 2 cycles helpful

RCOG
green-top
guideline:
how PMS is
treated

First line Exercise, cognitive behavioural therapy, vitamin B6
Combined new generation pill (cyclically or continuously)
Continuous or luteal phase (day 15–28) low dose SSRIs, e.g. citalopram/escitalopram 10 mg



Second line Estradiol patches (100 micrograms) + micronised progesterone (100 mg or 200 mg [day 17–28], orally *or* vaginally) or LNG-IUS 52 mg
Higher dose SSRIs continuously or luteal phase, e.g. citalopram/escitalopram 20–40 mg



Third line GnRH analogues + add-back HRT (continuous combined estrogen + progesterone [e.g. 50–100 micrograms estradiol patches *or* 2–4 doses of estradiol gel combined with micronised progesterone 100 mg/day] or tibolone 2.5 mg)

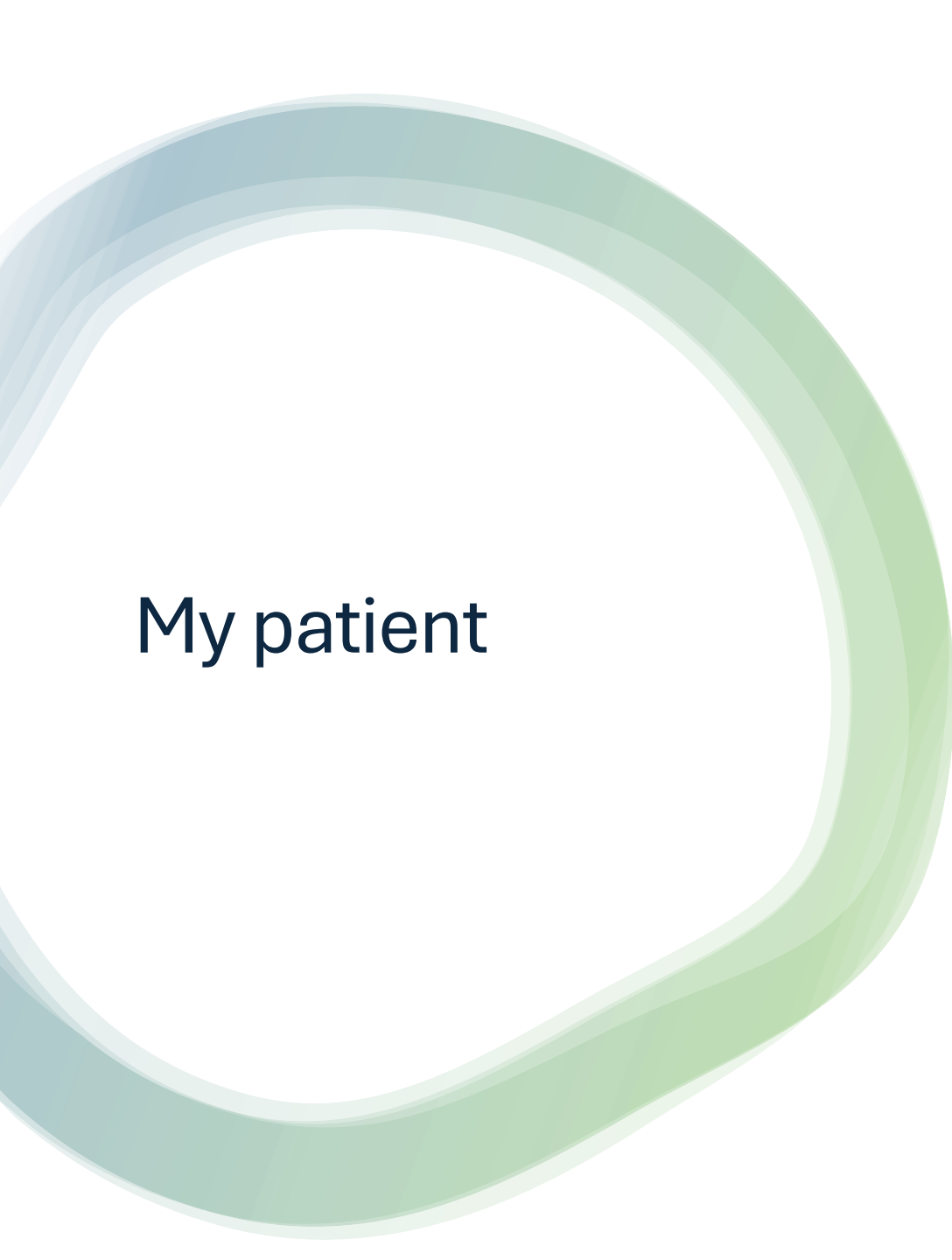


Fourth line Surgical treatment ± HRT



Hormonal (contraceptive) medical management

- Consider drospironone-containing COCs as first line medical management
- Consider continuous rather than cyclical use COC
- Treating PMS with progestogens *alone* is not appropriate
- No evidence to support the use of the LNG-IUS 52 mg *alone* to treat PMS symptoms.
- Severe PMS (secondary care):
 - Transdermal estradiol combined with cyclical progestogen, requires alternative barrier or intrauterine methods for contraception
 - GnRH analogues +/- add back HRT



My patient

- Hating taking tablets
- Was 30 years old, smoked 10 cigarettes/ day and cannabis on/off
- On discussion of risks and benefits:

Was not keen on COC

Opted to trial 52mg LNG IUD insertion, followed by PIFU to gynaecology to consider transdermal estradiol

We discussed lifestyle, CBT, exercise, stress, diet

Summary

We have lots of contraceptive tools/hormonal options

Take a good history, consider how your patient's individual circumstances influence their choice /contraceptive advice

CoSRH and RCOG resources are helpful

Sometimes it is trial and error

Questions about contraception?

My email:
emilykeating@nhs.net

Combined Pill



Condoms



Patch



Implant



Copper Coil



The Ring



IUS



Diaphragm



Fertility Aware



References

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