PIPADOR REVISION

MRCOG Part 1 Revision Notes

Anovulation

CLINICAL MANAGEMENT • LECTURE 485

VISUAL EXAMINATION REVISION NOTES

2026 Edition

485

MRCOG PART 1 REVISION NOTES | CLINICAL MANAGEMENT

Anovulation

Definitions, WHO classification, investigation and management of anovulation including PCOS (International PCOS Guideline 2023, NICE CG156)

≈ 25%	PCOS	Letrozole	Progesterone > 30 nmol/L
Of infertility is ovulatory	≈ 85% of anovulation	First-line in PCOS	Confirms ovulation

■ KEY FACTS: Learning objectives

- Define anovulation and oligo-ovulation and describe the WHO classification.
- Describe investigation of ovulatory disorders.
- Describe management of anovulation, including PCOS (International PCOS Guideline 2023, NICE CG156), hypothalamic and hyperprolactinaemic causes, and the long-term health of women with PCOS.

485.1 Key definitions

Term	Definition
Anovulation	Absence of ovulation — usually amenorrhoea or very irregular cycles
Oligo-ovulation	Infrequent or irregular ovulation (cycles > 35 days)
Mid-luteal progesterone	• Measured ≈ 7 days before the expected period (day 21 of a 28-day cycle) • > 30 nmol/L indicates ovulation
PCOS (Rotterdam)	Two of: oligo/anovulation, clinical/biochemical hyperandrogenism, polycystic ovarian morphology (or raised AMH in adults) — after excluding other causes
Ovulation induction	Medical treatment to produce one (or few) mature follicles in anovulatory women
Laparoscopic ovarian drilling (LOD)	Diathermy to the ovarian surface to restore ovulation in clomifene-resistant PCOS

■ IN PLAIN ENGLISH: Anovulation

Most women who do not ovulate have **PCOS**. Weight optimisation and **letrozole** restore ovulation in many; injections, ovarian drilling or IVF are next steps. PCOS is also a **long-term metabolic condition** that needs ongoing care.

485.2 Classification and investigation

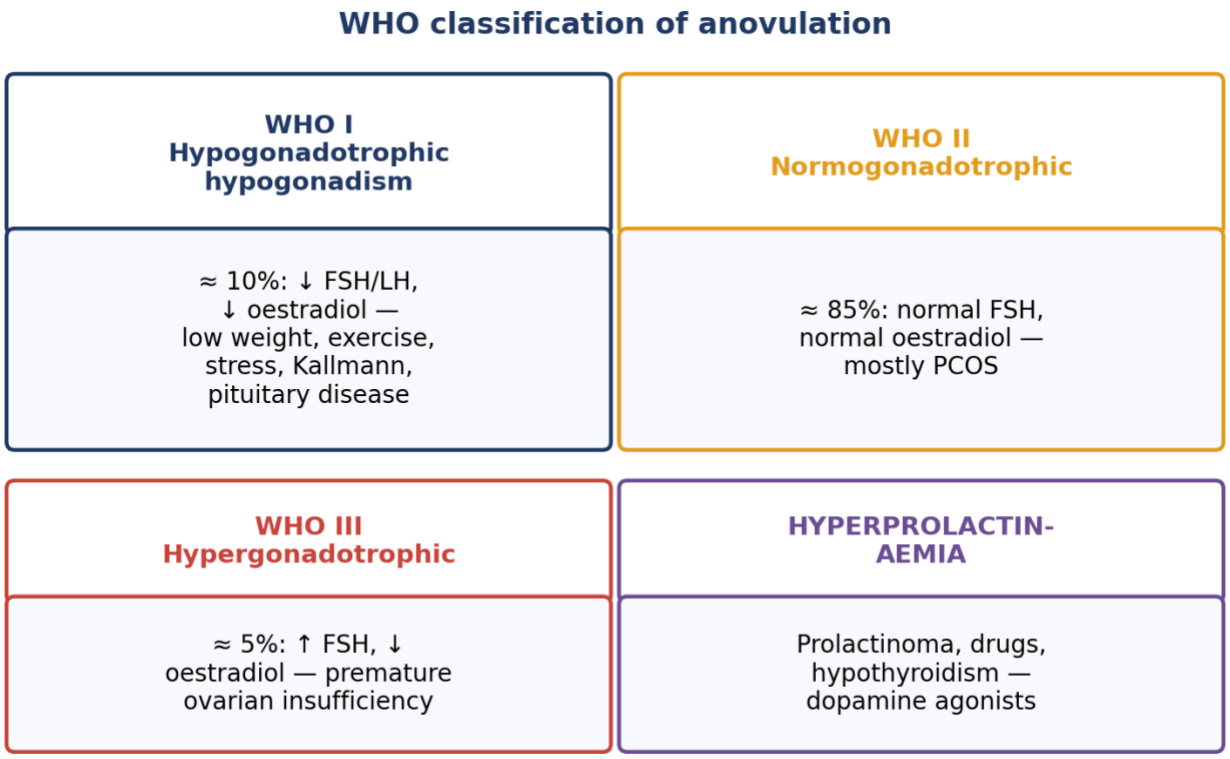


Figure 485.1 — WHO classification of anovulation

Test	Purpose
Mid-luteal progesterone	Confirm ovulation (repeat if irregular cycles — time to 7 days before expected period, then weekly until next period)
FSH, LH, oestradiol	Classify (↓ in WHO I, ↑ FSH in WHO III, LH:FSH often ↑ in PCOS)
Prolactin, TSH	Hyperprolactinaemia, thyroid disease
Testosterone, SHBG (FAI), ± 17-OHP	• Hyperandrogenism • Exclude NCCAH, androgen-secreting tumour (testosterone > 5 nmol/L)
AMH / pelvic USS	• PCOM (≥ 20 follicles per ovary or volume ≥ 10 mL) • AMH as alternative to USS in adults (2023)
Metabolic	OGTT/HbA1c, lipids, BMI, BP (PCOS)
Before treatment	Semen analysis, tubal patency (before gonadotrophins/if risk factors), rubella immunity, folic acid

485.3 Management of PCOS-related anovulation

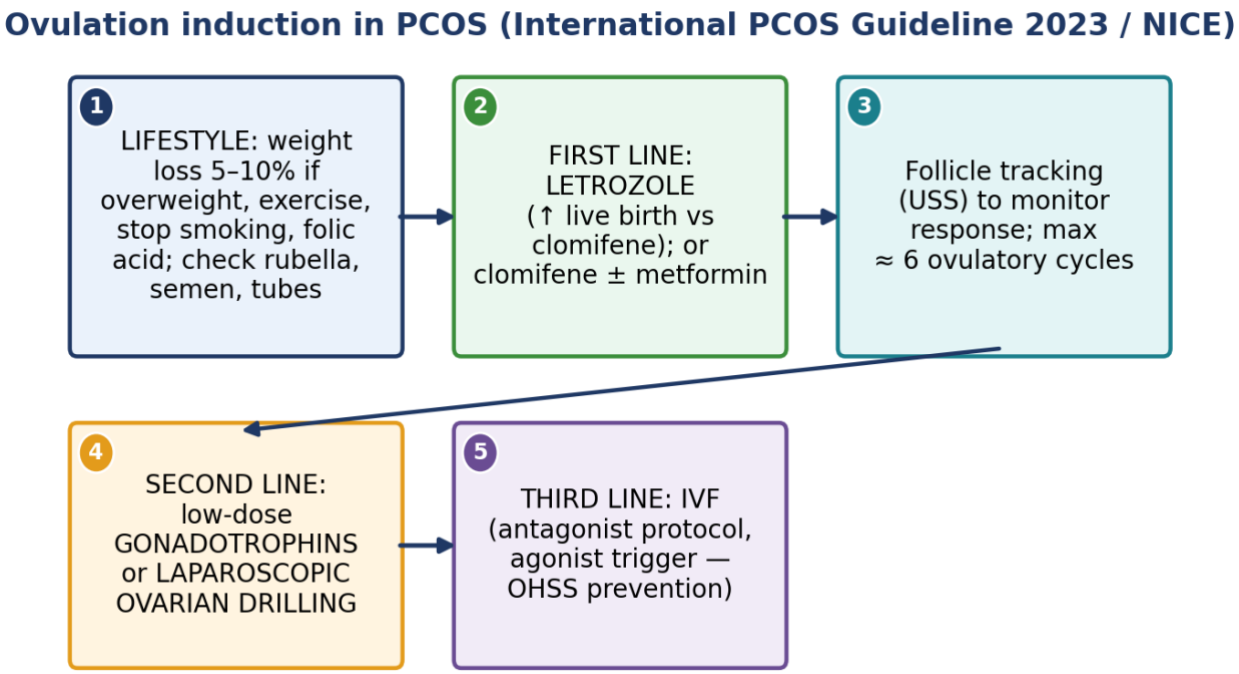


Figure 485.2 — Ovulation induction in PCOS

Treatment	Key points
Lifestyle	• Weight loss of 5–10% restores ovulation in many • BMI ≥ 30 associated with lower success and pregnancy risks
Letrozole	Aromatase inhibitor — first-line (higher live birth, fewer multiples vs clomifene) — off-label use
Clomifene citrate	• SERM • USS monitoring at least in first cycle (multiple pregnancy ≈ 10%, OHSS) • Limit ≈ 6 ovulatory cycles • Antioestrogenic effect on endometrium
Metformin	• Alone or with clomifene (especially if BMI ≥ 30 or clomifene-resistant) • GI side effects • Improves metabolic profile
Gonadotrophins	Low-dose step-up FSH with USS monitoring — cancel if > 2–3 dominant follicles
Laparoscopic ovarian drilling	• Clomifene-resistant women • Avoids multiple pregnancy/OHSS • Surgical risks, adhesions, ↓ ovarian reserve
IVF	• Third line or other indications • OHSS prevention (antagonist protocol, agonist trigger, freeze-all)

485.4 Other causes of anovulation

- **WHO I (hypothalamic/pituitary)**: restore weight/energy balance, reduce excessive exercise, psychological support
  - **Pulsatile GnRH** or **gonadotrophins with LH activity (hMG)** — clomifene/letrozole are ineffective.
- **Hyperprolactinaemia**: dopamine agonists (cabergoline or bromocriptine); MRI pituitary if prolactin very high or symptoms; stop causative drugs.

- **WHO III (POI)**: ovulation induction does not work — donor oocytes/IVF; HRT.

485.5 Long-term health in PCOS

- Metabolic: type 2 diabetes and GDM (OGTT in pregnancy), dyslipidaemia, NAFLD, cardiovascular risk — regular screening.
- Endometrial hyperplasia/cancer: induce a withdrawal bleed at least every 3–4 months (progestogens, COC, LNG-IUS); TVS if amenorrhoeic.
- Hirsutism/acne: COC, anti-androgens (with contraception), eflornithine, laser.
- Mental health (depression, anxiety, eating disorders), obstructive sleep apnoea, pregnancy complications (miscarriage, pre-eclampsia, preterm birth).

■ COMMON PITFALLS

Timing 'day 21 progesterone' incorrectly in long cycles.

Clomifene without ultrasound monitoring.

Using letrozole/clomifene in hypothalamic amenorrhoea (WHO I).

Ignoring long-term metabolic and endometrial risks of PCOS.

485.6 Must-know summary

■ EXAM TIP

- WHO I (↓ FSH/LH, hypothalamic), II (normal — PCOS ≈ 85%), III (↑ FSH — POI); hyperprolactinaemia.
- Confirm ovulation with mid-luteal progesterone (> 30 nmol/L).
- PCOS: lifestyle → letrozole (or clomifene ± metformin) → gonadotrophins/LOD → IVF; monitor for multiples/OHSS.
- WHO I: pulsatile GnRH/hMG; hyperprolactinaemia: cabergoline; PCOS long-term: diabetes, endometrial protection, mental health.

■ MNEMONIC / MEMORY AID

PCOS ovulation ladder — 'Lose weight, Letrozole, Low-dose FSH or drilling, then IVF'.