PIPADOR REVISION

MRCOG Part 1 Revision Notes

Prolactinoma

ENDOCRINOLOGY • LECTURE 198

VISUAL EXAMINATION REVISION NOTES

2026 Edition

198

MRCOG PART 1 REVISION NOTES | ENDOCRINOLOGY

Prolactinoma

Hyperprolactinaemia causes and investigation, prolactinoma treatment, and management before, during and after pregnancy

Commonest	< 10 mm	Cabergoline	Stop
Functioning pituitary adenoma	Microadenoma (≥ 10 = macro)	First-line treatment	Dopamine agonist when pregnant (micro)

■ KEY FACTS: Learning objectives

- Describe the causes and investigation of hyperprolactinaemia, including macroprolactin and the hook effect.
- Describe the presentation and treatment of prolactinomas.
- Describe management before, during and after pregnancy, including breastfeeding.

198.1 Hyperprolactinaemia

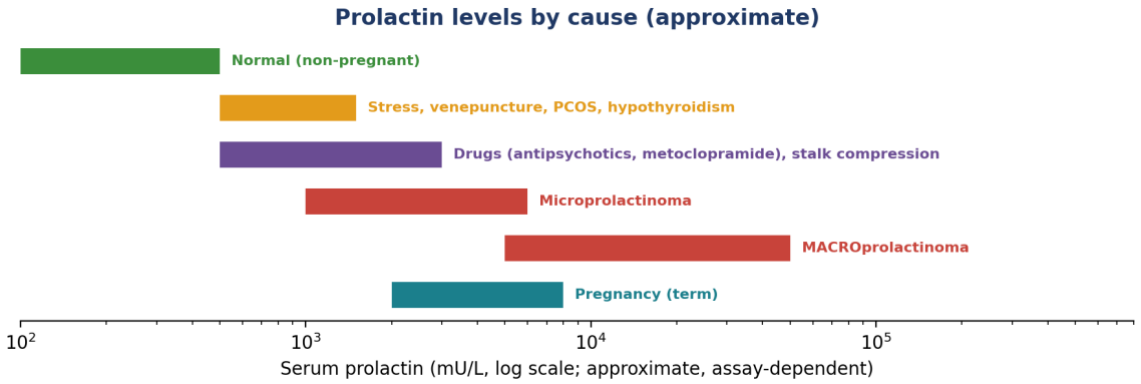


Figure 198.1 — Prolactin levels by cause (approximate)

Cause	Examples
Physiological	Pregnancy, breastfeeding, stress (including venepuncture), sleep, nipple stimulation, exercise
Drugs (dopamine antagonists)	Antipsychotics (risperidone, haloperidol), metoclopramide, domperidone, some antidepressants, opioids, oestrogens, verapamil
Pituitary/hypothalamic	Prolactinoma; stalk compression by non-functioning adenoma/craniopharyngioma (prolactin usually < ≈ 2000–3000 mU/L)
Other	Primary hypothyroidism (↑ TRH), PCOS (mild), chronic kidney disease, cirrhosis, chest wall lesions/herpes zoster
Artefact	Macroprolactin (prolactin–IgG complex; inactive) — check PEG precipitation

■ CLINICAL CORRELATION

- **Hook effect**: very high prolactin from a giant macroadenoma saturates the immunoassay → falsely modest result; request **serial dilution** when a large tumour has only mildly raised prolactin.
- Investigations: repeat prolactin, exclude pregnancy, TSH, renal function, drug history, macroprolactin; **pituitary MRI**; visual fields if macroadenoma; assess other pituitary hormones.

198.2 Prolactinoma — presentation and treatment

Presentation	Treatment
Women: oligo/amenorrhoea, galactorrhoea, subfertility, low libido, bone loss (low oestrogen — via ↓ kisspeptin/GnRH). Men: hypogonadism, erectile dysfunction, and often macroadenoma with mass effects (headache, bitemporal hemianopia, hypopituitarism)	Dopamine agonists: cabergoline (once/twice weekly; better tolerated and more effective; echocardiography at high cumulative doses — valvulopathy) or bromocriptine (longer pregnancy safety record). Normalises prolactin and shrinks tumour in most; transsphenoidal surgery if intolerant/resistant or apoplexy; radiotherapy rarely

198.3 Pregnancy

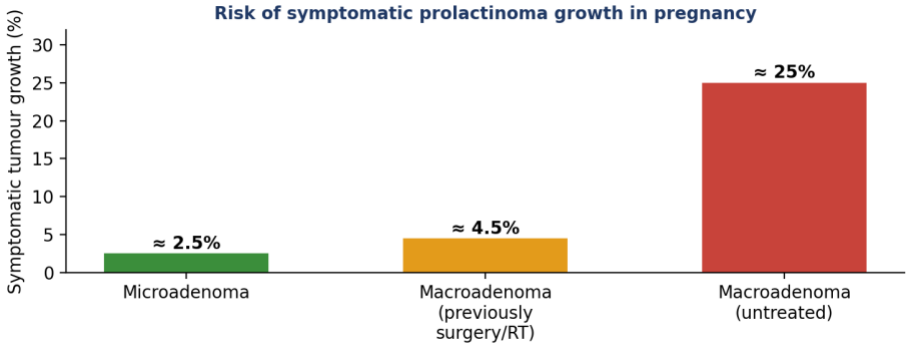


Figure 198.2 — Risk of symptomatic tumour growth in pregnancy

Situation	Management
Pre-conception	Restore ovulation with a dopamine agonist; for macroadenomas, consider surgery or ensure shrinkage before conception; counsel about growth risk
Microadenoma	Stop dopamine agonist once pregnancy is confirmed; no routine prolactin (rises physiologically) or MRI; ask about headache/visual symptoms each trimester
Macroadenoma	Continue or stop dopamine agonist (individualised); visual field testing each trimester; endocrinology/MDT
Symptomatic growth	MRI without gadolinium; restart bromocriptine/cabergoline; surgery (2nd trimester) if vision threatened despite medication; consider delivery if late
Labour	Normal obstetric management; vaginal birth appropriate
Postpartum / breastfeeding	Breastfeeding allowed (does not increase tumour growth); do not restart dopamine agonist while breastfeeding (suppresses lactation) unless tumour indications; reassess prolactin/MRI after weaning — remission is common

198.4 Must-know summary

■ **EXAM TIP**

- Exclude pregnancy, drugs, hypothyroidism, renal failure and **macroprolactin**; beware the **hook effect**.
- Prolactin suppresses GnRH via kisspeptin → amenorrhoea, galactorrhoea, infertility, osteoporosis.
- **Cabergoline** first-line; surgery for resistance/apoplexy.
- Pregnancy: stop agonist for micro; macro — visual fields each trimester; growth risk micro ≈ 2–3%, untreated macro ≈ 20–30%.
- Prolactin levels are not useful in pregnancy; breastfeeding is allowed.

■ MNEMONIC / MEMORY AID

'Pregnancy, Pills, Pituitary, Primary hypothyroidism, PCOS, Poor kidneys' — the 6 Ps of hyperprolactinaemia.