PIPADOR REVISION

MRCOG Part 1 Revision Notes

Gestational Thyroid Disease

ENDOCRINOLOGY • LECTURE 192

VISUAL EXAMINATION REVISION NOTES

2026 Edition

192

MRCOG PART 1 REVISION NOTES | ENDOCRINOLOGY

Gestational Thyroid Disease

Gestational transient thyrotoxicosis, postpartum thyroiditis, thyroid nodules and cancer, iodine and screening

1–3%	5–10%	250 µg	Targeted
Gestational transient thyrotoxicosis	Postpartum thyroiditis	Daily iodine in pregnancy (WHO)	TFT testing in high-risk women (UK)

■ KEY FACTS: Learning objectives

- Describe thyroid disorders specific to pregnancy: gestational transient thyrotoxicosis and postpartum thyroiditis.
- Distinguish gestational thyrotoxicosis from Graves' disease.
- Describe thyroid nodules and cancer in pregnancy, iodine nutrition, and who to test.

192.1 Physiological background

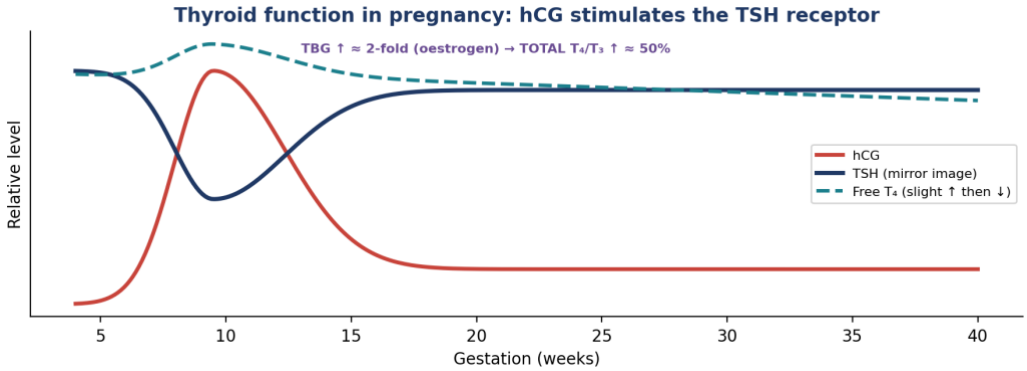


Figure 192.1 — hCG drives first-trimester thyroid changes

hCG shares its α-subunit with TSH and weakly stimulates the TSH receptor; very high or prolonged hCG (twins, molar pregnancy, hyperemesis) can produce biochemical hyperthyroidism. TBG doubles and iodine requirements rise (Lecture 179).

192.2 Gestational transient thyrotoxicosis (GTT)

Feature	GTT	Graves' disease
Mechanism	hCG stimulation of TSH receptor	TRAb stimulation
Timing	1st trimester (peak 8–12 wk); resolves by 14–18 wk	Any time; often pre-existing; flares postpartum
Associations	Hyperemesis gravidarum, twins, molar pregnancy	Personal/family autoimmunity
Signs	Mild; no goitre, no eye signs	Goitre, ophthalmopathy, pretibial myxoedema
TRAb	Negative	Positive
fT_3 : fT_4	Mainly fT_4 ↑	fT_3 often disproportionately ↑
Treatment	Supportive (fluids, antiemetics); β-blocker if very symptomatic; no antithyroid drugs	Antithyroid drugs (Lecture 191)

192.3 Postpartum thyroiditis

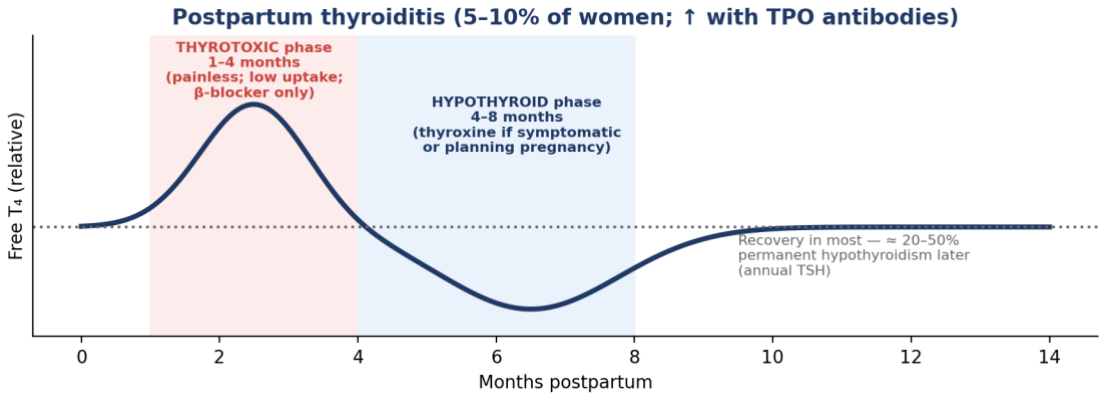


Figure 192.2 — The biphasic course of postpartum thyroiditis

- **Autoimmune** destructive thyroiditis within 12 months of delivery (or miscarriage); ↑ with **TPO antibodies** (≈ 50% of TPO+ women), **type 1 diabetes**, previous episode.
- **Thyrotoxic phase** (1–4 months): painless, low radioiodine uptake (not Graves' — TRAb negative) → **β-blocker only** (no antithyroid drugs).
- **Hypothyroid phase** (4–8 months): levothyroxine if symptomatic, TSH > 10, breastfeeding or planning pregnancy; withdraw after ≈ 12 months; **annual TSH** (risk of permanent hypothyroidism). Can mimic or coexist with **postnatal depression** — check TFTs.

192.4 Thyroid nodules and cancer

Topic	Key points
Evaluation	Ultrasound and FNA are safe in any trimester; radioiodine scanning contraindicated
Differentiated thyroid cancer	Usually indolent — surgery can be deferred to after delivery, or performed in the 2nd trimester if growing/aggressive; prognosis not worsened by pregnancy
After treatment	Avoid pregnancy for ≥ 6–12 months after radioiodine; TSH suppression targets maintained (↑ levothyroxine in pregnancy)
Medullary thyroid cancer	MEN2 — exclude phaeochromocytoma before surgery or delivery

192.5 Iodine and screening

- **Iodine**: requirement ≈ 250 µg/day (WHO) — UK women are often mildly deficient; dairy and fish are main sources; avoid kelp. Mild deficiency is linked to lower offspring IQ.
- **Isolated maternal hypothyroxinaemia** (low fT_4, normal TSH): consider iodine deficiency; treatment benefit unproven.
- **Universal screening is not recommended in the UK**; test TFTs in women with: thyroid disease or symptoms, **type 1 diabetes**, other autoimmune disease, previous postpartum thyroiditis, goitre, head/neck irradiation, **amiodarone/lithium**, recurrent miscarriage/subfertility (local policy).

192.6 Must-know summary

■ **EXAM TIP**

- GTT: hCG-driven, 1st trimester, **hyperemesis**, TRAb negative, no goitre/eye signs — **supportive care only**.
- Postpartum thyroiditis: thyrotoxic 1–4 months (β-blocker) → hypothyroid 4–8 months (thyroxine if needed); TPO+ women at risk; annual TSH.
- Thyroid nodules: USS + FNA safe; no radioiodine; most cancers can wait until after birth.
- UK: targeted (not universal) thyroid testing; iodine 250 µg/day.

■ MNEMONIC / MEMORY AID

Postpartum thyroiditis — 'Hot then Cold' (hyper → hypo).