PIPADOR REVISION

MRCOG Part 1 Revision Notes

Perioperative Management of Endocrine Disorders

ENDOCRINOLOGY • LECTURE 202

VISUAL EXAMINATION REVISION NOTES

2026 Edition

MRCOG PART 1 REVISION NOTES | ENDOCRINOLOGY

202 Perioperative Management of Endocrine Disorders

Diabetes and VRIII, steroid cover, thyroid, pituitary, phaeochromocytoma and calcium disorders around surgery and labour

6–10	4–7	100 mg	Euthyroid
Perioperative glucose target (mmol/L, JBDS)	Intrapartum glucose target (NICE)	Hydrocortisone at induction / labour	Before elective surgery

■ KEY FACTS: Learning objectives

- Describe perioperative management of diabetes, including VRIII and the effect of antenatal steroids.
- Describe glucocorticoid cover for adrenal insufficiency and steroid-treated patients in surgery and labour.
- Describe perioperative management of thyroid, pituitary, phaeochromocytoma and calcium disorders.

202.1 Principles

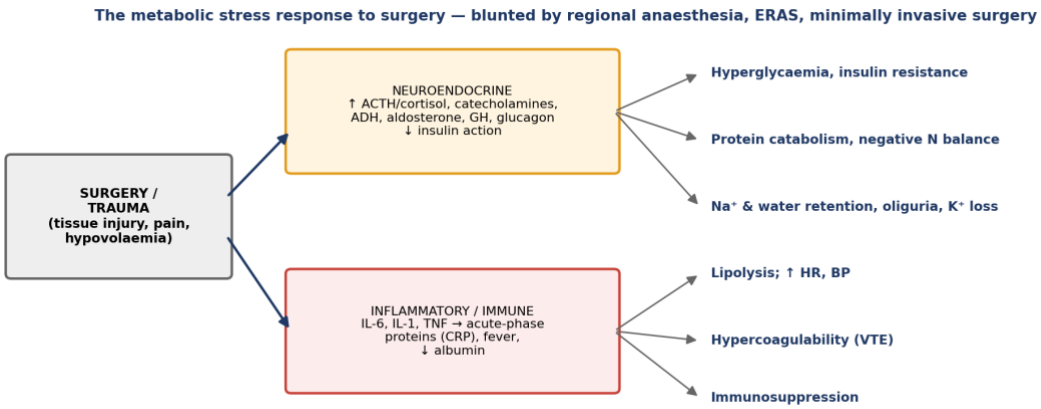


Figure 202.1 — The surgical stress response

Surgery and labour provoke a **stress response** (↑ cortisol, catecholamines, glucagon, GH; insulin resistance) — patients with endocrine disease cannot mount or regulate it normally. Principles: **identify** the disorder pre-operatively, **optimise** control, plan **multidisciplinary** care (anaesthetist, endocrinologist, obstetrician), schedule **early on the list**, and give clear post-operative instructions.

202.2 Diabetes

Element	Management (JBDS-IP; NICE NG3 in pregnancy)
Pre-op	HbA1c (elective surgery ideally < 69 mmol/mol); first on list; minimise fasting
VRIII	Variable-rate IV insulin infusion with glucose-containing fluid when > 1 meal will be missed, poor control or type 1 in labour; hourly capillary glucose; continue long-acting basal insulin (≈ 80% dose) to avoid DKA when VRIII stops
Oral agents	SGLT2 inhibitors: stop the day before and day of surgery (euglycaemic DKA); sulfonylureas omitted on day of surgery (hypoglycaemia); metformin usually continued if ≤ 1 missed meal (omit with contrast + eGFR < 60)
Targets	6–10 mmol/L (acceptable 4–12) perioperatively; 4–7 mmol/L in labour (NICE)

Element	Management (JBDS-IP; NICE NG3 in pregnancy)
Antenatal corticosteroids	Betamethasone causes hyperglycaemia for ≈ 3–5 days — increase insulin per protocol/VRIII (risk of DKA in type 1)
Post-delivery	Reduce insulin immediately (type 1: to pre-pregnancy dose or less; hypoglycaemia if breastfeeding); stop treatment in GDM; check glucose before meals
Hypoglycaemia	< 4 mmol/L — oral glucose or IV 10% glucose; never stop basal insulin in type 1

202.3 Adrenal insufficiency and steroid cover

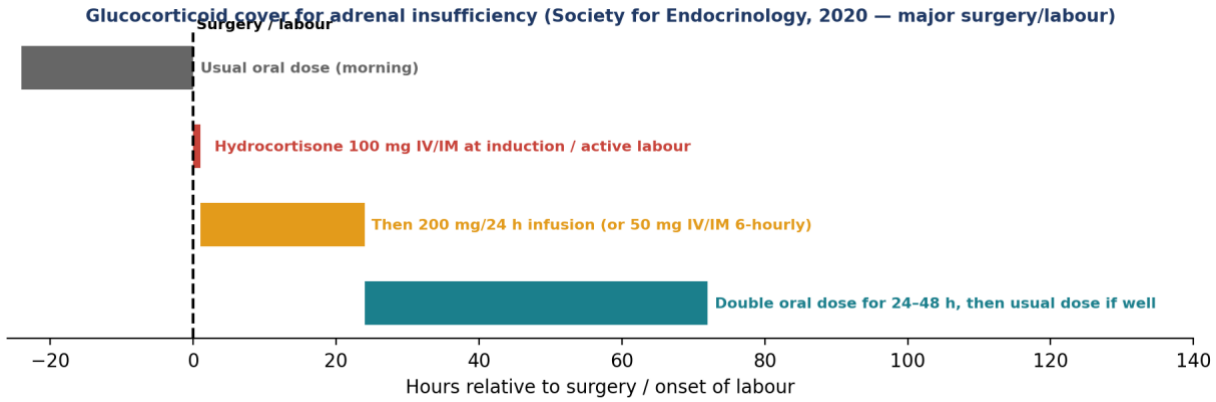


Figure 202.2 — Glucocorticoid cover for surgery and labour

- Who needs cover: **Addison's, hypopituitarism, CAH**, and anyone on **≥ 5 mg prednisolone (or equivalent) for ≥ 4 weeks** (HPA suppression), including inhaled/topical high doses.
- **Major surgery, CS or labour**: hydrocortisone **100 mg IV/IM** at induction/onset of active labour, then **200 mg/24 h** continuous infusion (or 50 mg 6-hourly); **double the usual oral dose for 24–48 h** after, then usual dose if well (Society for Endocrinology, 2020). Minor procedures: smaller doses.
- Unexplained hypotension, vomiting or hypoglycaemia post-operatively → **treat as adrenal crisis**.

202.4 Thyroid, pituitary and other disorders

Disorder	Perioperative considerations
Hyperthyroidism	Defer elective surgery until euthyroid; emergency: β-blocker, antithyroid drug (PTU), iodine (Lugol's) ≥ 1 h after PTU, steroids — prevent thyroid storm (labour, CS, infection)
Hypothyroidism	Mild disease does not delay surgery; severe → sensitivity to anaesthetics/opioids, hypothermia, hyponatraemia, delayed recovery (myxoedema coma — IV liothyronine + hydrocortisone); levothyroxine half-life ≈ 7 days — short omission harmless
Phaeochromocytoma	α-blockade 10–14 days then β-blockade; fluid loading; arterial line; avoid metoclopramide; post-op hypotension and hypoglycaemia (Lecture 196)
Pituitary disease / surgery	Steroid cover; monitor for DI (polyuria, ↑ Na^+ — desmopressin) and SIADH (triphasic response); visual fields
Diabetes insipidus	Continue desmopressin (IV/IM/nasal if NBM); avoid both hypo- and hypernatraemia; strict fluid balance
Hyperparathyroidism / hypercalcaemia	IV hydration, monitor Ca^{2+}; post-parathyroidectomy hungry bone hypocalcaemia
Obstetric $MgSO_4$	Potentiates neuromuscular blockers; monitor reflexes and Ca^{2+}

202.5 Must-know summary

■ **EXAM TIP**

- Diabetes: VRIII if > 1 missed meal; **continue basal insulin**; **stop SGLT2i** day before; targets 6–10 (surgery) / **4–7 (labour)**; ↑ insulin with antenatal steroids; ↓ insulin after delivery.
- Steroid cover: **100 mg hydrocortisone at induction/labour → 200 mg/24 h → double oral dose 24–48 h**.
- Hyperthyroid: make euthyroid; storm prevention with β-blocker, PTU, iodine, steroids.
- Phaeo: α before β; pituitary: steroids, watch for DI.

■ **MNEMONIC / MEMORY AID**

Perioperative endocrine checklist — 'Sugar, Steroids, Thyroid, Salt (Na^+), Pressure (phaeo)'.