PIPADOR REVISION

MRCOG Part 1 Revision Notes

Postpartum Haemorrhage

CLINICAL MANAGEMENT • LECTURE 482

VISUAL EXAMINATION REVISION NOTES

2026 Edition

482

MRCOG PART 1 REVISION NOTES | CLINICAL MANAGEMENT

Postpartum Haemorrhage

Definitions, risk factors, prevention and management of primary and secondary PPH (RCOG GTG 52)

≥ 500 mL	> 1000 mL	Tone ≈ 70%	TXA 1 g
Primary PPH (< 24 h)	Major PPH	Commonest cause	Within 3 hours

■ KEY FACTS: Learning objectives

- Define primary and secondary postpartum haemorrhage (PPH) and grade severity.
- Describe risk factors, prevention and the 4 Ts.
- Describe management of PPH — resuscitation, mechanical, pharmacological, surgical and blood product therapy (RCOG GTG 52) — and secondary PPH.

482.1 Key definitions

Term	Definition
Primary PPH	Blood loss ≥ 500 mL from the genital tract within 24 hours of birth
Minor PPH	500–1,000 mL without clinical shock
Major PPH	• > 1,000 mL: moderate 1,001–2,000 mL • Severe > 2,000 mL — or any loss with clinical shock
Secondary PPH	Abnormal or excessive bleeding from the genital tract between 24 hours and 12 weeks after birth
Active management of the third stage	Prophylactic uterotonic, delayed cord clamping and controlled cord traction
Quantitative blood loss (QBL)	Weighing/measuring blood loss rather than estimating — more accurate
Major obstetric haemorrhage (MOH) protocol	Unit protocol mobilising team, blood bank and products rapidly

■ IN PLAIN ENGLISH: PPH

PPH is a leading cause of maternal death worldwide and of severe morbidity in the UK. Most is due to a **uncontracted uterus** (atony). Success depends on **calling for help early, measuring blood loss, treating the cause while resuscitating**, and replacing blood and clotting factors.

482.2 Causes and risk factors

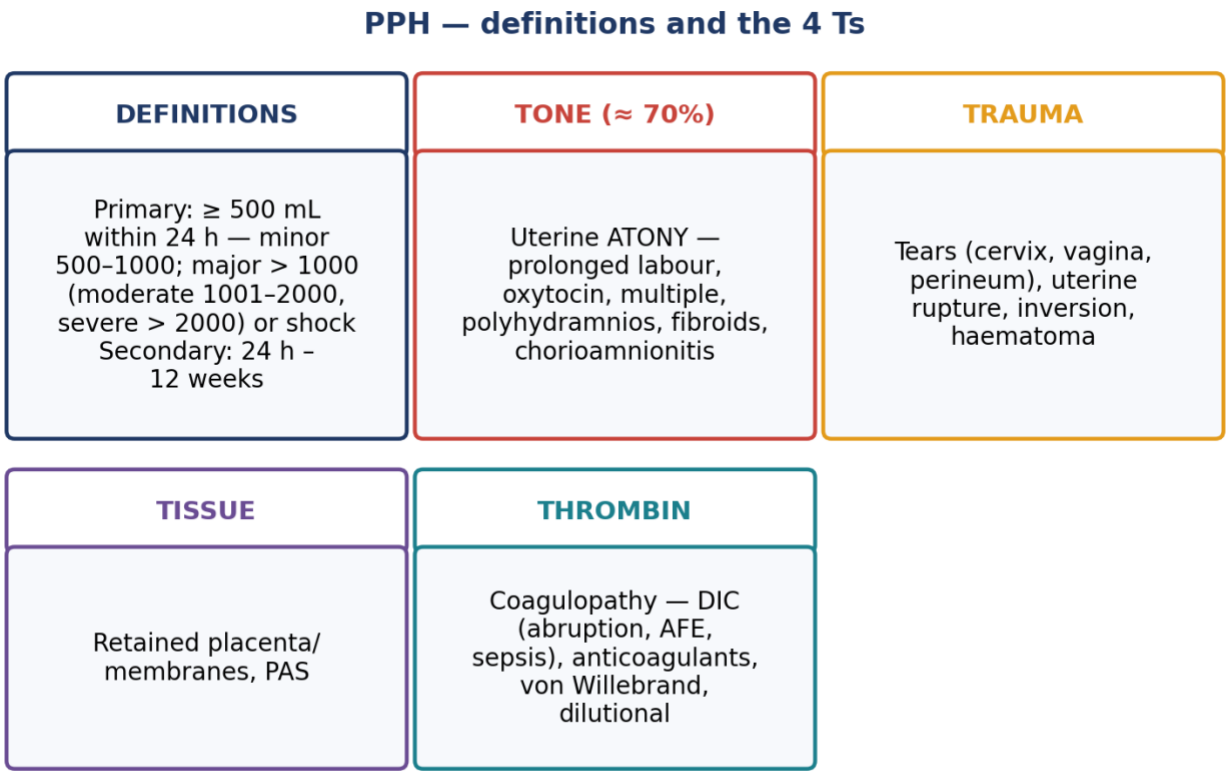


Figure 482.1 — Definitions and the 4 Ts

Antenatal risk factors	Intrapartum risk factors
Previous PPH, placenta praevia/accreta, abruption, pre-eclampsia, multiple pregnancy, macrosomia, polyhydramnios, fibroids, anaemia, BMI > 35, age > 40, Asian ethnicity, anticoagulants	• Prolonged labour, oxytocin augmentation, IOL • Operative birth (CS, instrumental), retained placenta • Pyrexia/chorioamnionitis • General anaesthesia, episiotomy

482.3 Prevention

- Treat antenatal anaemia (Hb, ferritin; oral or IV iron).
- **Active management of the third stage**: oxytocin 10 IU IM (vaginal birth)
  - Oxytocin 5 IU slow IV or carbetocin 100 µg IV at CS
  - Syntometrine where no hypertension (slightly ↓ PPH, more vomiting).
- Consider tranexamic acid for women at high risk (e.g. at CS with risk factors) — per local policy.
- Plan birth in an appropriate unit for PAS/placenta praevia; cell salvage availability; QBL measurement for all births.

482.4 Management of major PPH

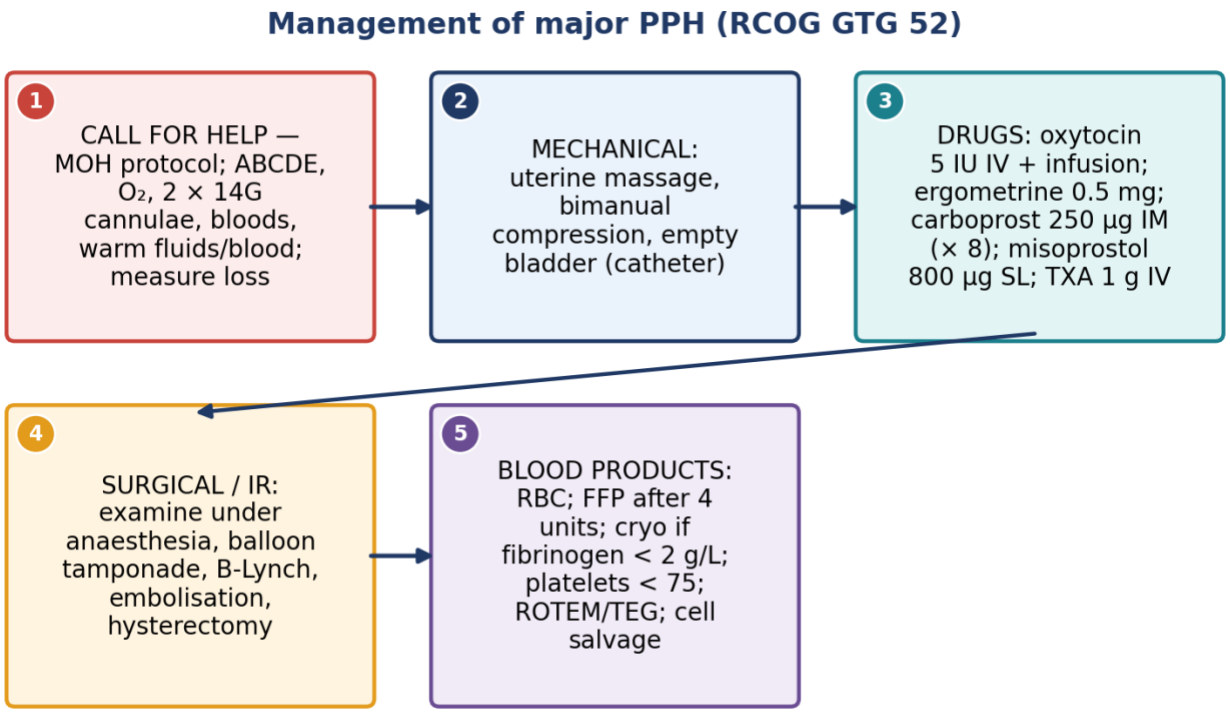


Figure 482.2 — Management of major PPH

Step	Details (RCOG GTG 52)
Communication	• Call for help: senior midwife, obstetrician, anaesthetist, haematology/blood bank • MOH protocol • Scribe
Resuscitation	• ABCDE, high-flow O_2, two 14G cannulae • Bloods (FBC, coag, fibrinogen, crossmatch 4 units, U&E, LFT), lie flat, keep warm • Crystalloid up to 2 L then blood
Monitoring	Pulse, BP, RR, SpO_2, urine output (catheter), early warning score; QBL
Tone	• Uterine massage, bimanual compression, empty bladder • Oxytocin 5 IU slow IV (repeat) + infusion (e.g. 40 IU in 500 mL over 4 h) • Ergometrine 0.5 mg IV/IM (not if hypertensive) • Carboprost 250 µg IM every 15 min up to 8 doses (not in asthma) • Misoprostol 800 µg sublingual
Tranexamic acid	1 g IV (repeat after 30 min if bleeding continues) — within 3 hours of birth (WOMAN trial)
Trauma / tissue	• Examination under anaesthesia — repair tears, remove retained tissue • Manual removal of placenta • Replace uterine inversion
Surgical/IR	• Intrauterine balloon tamponade (first-line surgical for atony) • B-Lynch/compression sutures • Uterine/internal iliac artery ligation • Interventional radiology (embolisation) • Hysterectomy (early if PAS or uncontrolled)
Blood products	• Red cells (O-negative/group-specific) • FFP 12–15 mL/kg after 4 units RBC if no coag results • Cryoprecipitate if fibrinogen < 2 g/L

Step	Details (RCOG GTG 52)
	• Platelets if < 75 × 10^9/L • Viscoelastic testing (ROTEM/TEG) to guide fibrinogen • Cell salvage
Aftercare	HDU, VTE prophylaxis once bleeding controlled, iron, debrief, documentation

482.5 Secondary PPH

- Causes: endometritis, retained products of conception, subinvolution, rarely GTD, pseudoaneurysm/AV malformation.
- Management: assess haemodynamic status, FBC, CRP, cultures (vaginal swabs, blood), pelvic ultrasound
  - Antibiotics (e.g. co-amoxiclav, or clindamycin + gentamicin if septic)
  - Uterotonics
  - Surgical evacuation if significant RPOC (senior surgeon — perforation risk)
  - Check hCG if persistent.

■ COMMON PITFALLS

Underestimating blood loss (use QBL; shock index > 0.9).

Delaying the call for help or blood products.

Giving ergometrine in hypertension or carboprost in asthma.

Forgetting to check for trauma when the uterus is well contracted.

482.6 Must-know summary

■ EXAM TIP

- Primary PPH ≥ 500 mL within 24 h; major > 1,000 mL (severe > 2,000) or shock; secondary 24 h–12 weeks.
- 4 Ts: tone (≈ 70%), trauma, tissue, thrombin.
- Prevention: oxytocin 10 IU IM; treat anaemia; plan for high risk.
- Management: call for help, resuscitate, massage/bimanual compression, oxytocin → ergometrine → carboprost → misoprostol, TXA 1 g; EUA, balloon, B-Lynch, IR, hysterectomy; FFP after 4 units, cryo if fibrinogen < 2 g/L.

■ MNEMONIC / MEMORY AID

4 Ts — Tone, Trauma, Tissue, Thrombin.