PIPADOR REVISION

MRCOG Part 1 Revision Notes

Maternal Collapse

CLINICAL MANAGEMENT • LECTURE 484

VISUAL EXAMINATION REVISION NOTES

2026 Edition

484

MRCOG PART 1 REVISION NOTES | CLINICAL MANAGEMENT

Maternal Collapse

Definitions, causes, resuscitation and cause-specific management of maternal collapse and cardiac arrest (RCOG GTG 56)

Left uterine displacement	4 minutes	5 minutes	4 Hs & 4 Ts
≥ 20 weeks	No ROSC → hysterotomy	Birth of baby	+ obstetric causes

■ **KEY FACTS: Learning objectives**

- Define maternal collapse and resuscitative hysterotomy (perimortem caesarean section).
- Describe the causes of maternal collapse and the physiological changes of pregnancy that affect resuscitation.
- Describe the management of maternal collapse and cardiac arrest in pregnancy, including cause-specific treatment (RCOG GTG 56).

484.1 Key definitions

Term	Definition
Maternal collapse	An acute event involving the cardiorespiratory systems and/or brain, resulting in a reduced or absent conscious level (and potentially death), at any stage in pregnancy and up to 6 weeks after birth
Cardiac arrest	Loss of cardiac output — no signs of life/pulse
ROSC	Return of spontaneous circulation
Aortocaval compression	Gravid uterus compressing the IVC and aorta when supine (from ≈ 20 weeks) — ↓ venous return and cardiac output
Resuscitative hysterotomy (perimortem CS)	Emergency delivery of the fetus during maternal cardiac arrest to improve maternal resuscitation (and fetal survival)
Amniotic fluid embolism (AFE)	Sudden collapse with hypoxia, hypotension and coagulopathy during labour/birth or shortly afterwards

■ **IN PLAIN ENGLISH: Maternal collapse**

In pregnancy the uterus compresses the abdominal large blood vessels and the mother desaturates quickly. Resuscitation therefore adds **left uterine displacement, early airway control and delivery of the baby within 5 minutes** if circulation does not return — primarily to save the mother.

484.2 Causes and physiology

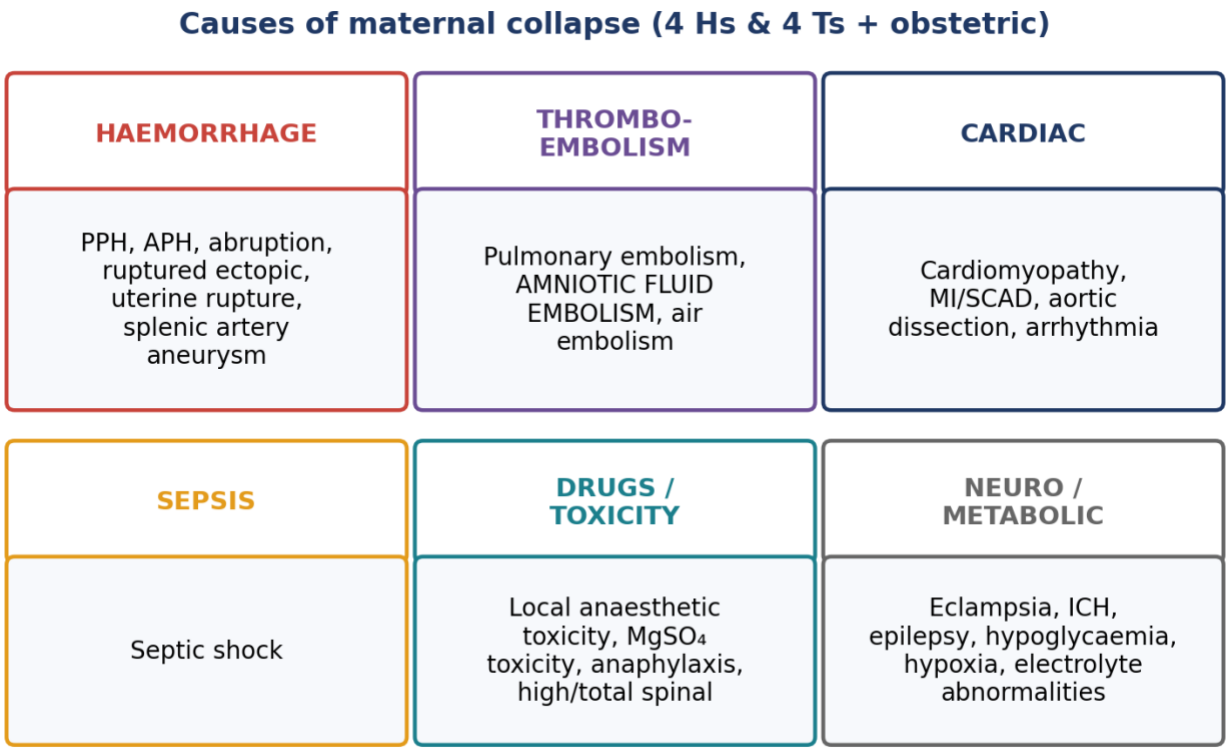


Figure 484.1 — Causes of maternal collapse

Physiological change	Effect on resuscitation
Aortocaval compression	Reduces CPR effectiveness — manual left uterine displacement
↓ FRC, ↑ O_2 consumption	Rapid hypoxia — high-flow O_2, early intubation
↑ Aspiration risk, airway oedema, breast enlargement	Difficult airway — experienced anaesthetist, video laryngoscope, smaller tube
↑ Blood volume, dilutional anaemia	Large blood loss before signs of shock
Hypercoagulability	↑ VTE/PE

484.3 Management of collapse and arrest

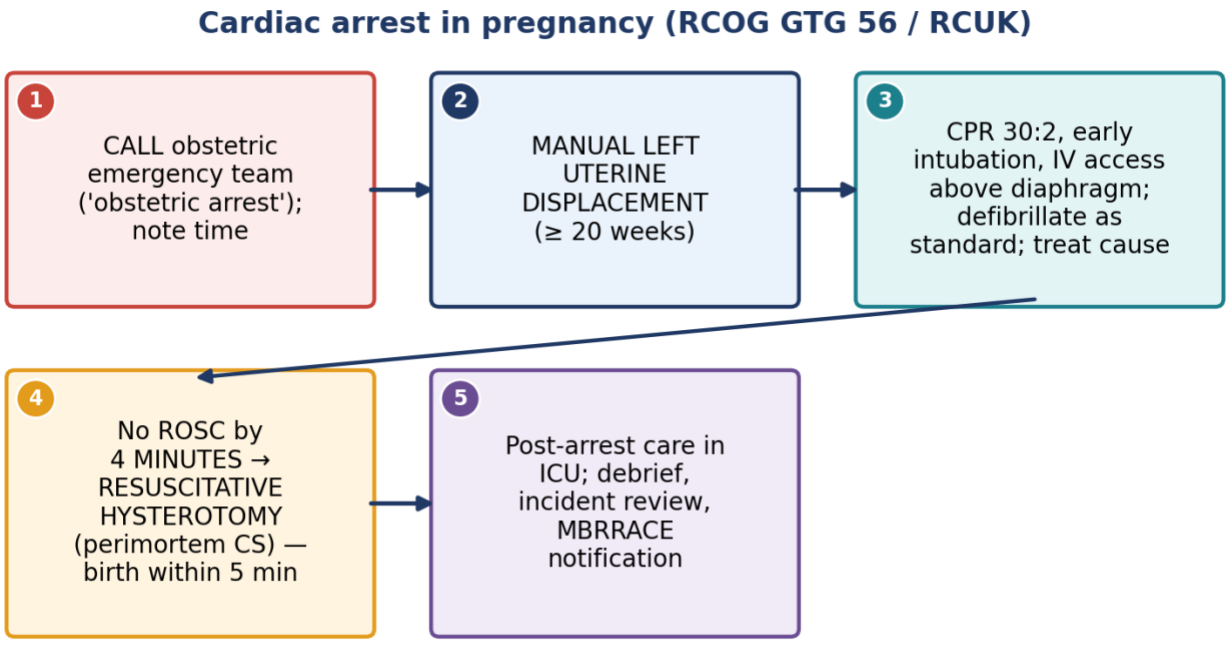


Figure 484.2 — Cardiac arrest in pregnancy

- **Collapse without arrest**: ABCDE assessment
  - Call the obstetric emergency team
  - Manual left uterine displacement/left lateral position, high-flow O_2, IV access, bloods
  - Identify and treat the cause.
- **Cardiac arrest**: call 2222 'obstetric (maternal) cardiac arrest' with the neonatal team
  - CPR 30:2 with hands in the standard position
  - Manual left uterine displacement
  - Early intubation
  - IV/IO access **above the diaphragm**
  - Defibrillation and drugs as per standard ALS (no change in energy or adrenaline doses)
  - Remove fetal monitoring before defibrillation.
- **Resuscitative hysterotomy**: if no ROSC within **4 minutes** of arrest in a woman ≥ 20 weeks (uterus at/above umbilicus), aim to deliver within **5 minutes**
  - Perform where the arrest occurs (do not move to theatre)
  - A scalpel is all that is needed
  - Continue CPR throughout.

484.4 Cause-specific treatment

Cause	Specific treatment
Haemorrhage	Major haemorrhage protocol, control bleeding (Lecture 482)
Pulmonary embolism	Thrombolysis in massive PE with arrest/shock; anticoagulation
Amniotic fluid embolism	• Supportive — oxygenation, circulatory support, aggressive treatment of DIC (blood products), deliver • Report to UKOSS
Eclampsia	$MgSO_4$ 4 g IV then 1 g/h; control BP
$MgSO_4$ toxicity	Stop infusion, 10 mL 10% calcium gluconate IV

Cause	Specific treatment
Local anaesthetic toxicity	• Stop LA • 20% lipid emulsion 1.5 mL/kg bolus then infusion (AAGBI) • Prolonged CPR
Anaphylaxis	• Adrenaline 0.5 mg IM (repeat after 5 min), fluids, antihistamine • Mast cell tryptase
Sepsis	Sepsis Six, source control (Lecture 483)
Cardiac (MI/SCAD, dissection, cardiomyopathy)	Cardiology input, PCI, cardiothoracic surgery; consider ECMO
Hypoglycaemia	IV glucose

484.5 After the event

- Transfer to ICU for post-resuscitation care with senior multidisciplinary input.
- Contemporaneous documentation (scribe, times of collapse, CPR and delivery)
  - Debrief family and staff
  - Incident reporting (PSIRF/MNSI)
  - MBRRACE-UK notification of maternal deaths
  - UKOSS reporting where applicable (AFE, cardiac arrest).
- Regular multidisciplinary skills drills (e.g. PROMPT) for collapse and perimortem CS.

■ COMMON PITFALLS

Supine CPR without uterine displacement.

Waiting to transfer to theatre for hysterotomy.

Forgetting reversible obstetric causes ($MgSO_4$, LA toxicity, AFE).

484.6 Must-know summary

■ EXAM TIP

- Maternal collapse = acute cardiorespiratory/neurological event with reduced consciousness, pregnancy to 6 weeks postpartum.
- Causes: 4 Hs & 4 Ts plus haemorrhage, AFE, eclampsia, PE, cardiac, sepsis, drug toxicity, anaphylaxis.
- Arrest: call obstetric arrest team, CPR 30:2, manual left uterine displacement, early intubation, IV above the diaphragm, standard ALS drugs/defibrillation.
- No ROSC by 4 min (≥ 20 weeks) → resuscitative hysterotomy at the scene, birth within 5 min.

■ MNEMONIC / MEMORY AID

'4 minutes to decide, 5 minutes to deliver'.