PIPADOR REVISION

MRCOG Part 1 Revision Notes

Tocolytics

PHARMACOLOGY • LECTURE 380

VISUAL EXAMINATION REVISION NOTES

2026 Edition

380

MRCOG PART 1 REVISION NOTES | PHARMACOLOGY

Tocolytics

Mechanisms, indications, contraindications and adverse effects of tocolytic drugs

Nifedipine	Atosiban	≈ 48 h	Indomethacin
First line (UK)	OT receptor antagonist	Delay achieved — steroids, $MgSO_4$	Avoid > 30–32 wk

■ KEY FACTS: Learning objectives

- Describe the mechanisms of tocolytic drugs.
- Describe indications, contraindications and adverse effects (NICE NG25).
- Describe acute tocolysis for uterine hyperstimulation and at caesarean section.

380.1 Mechanisms

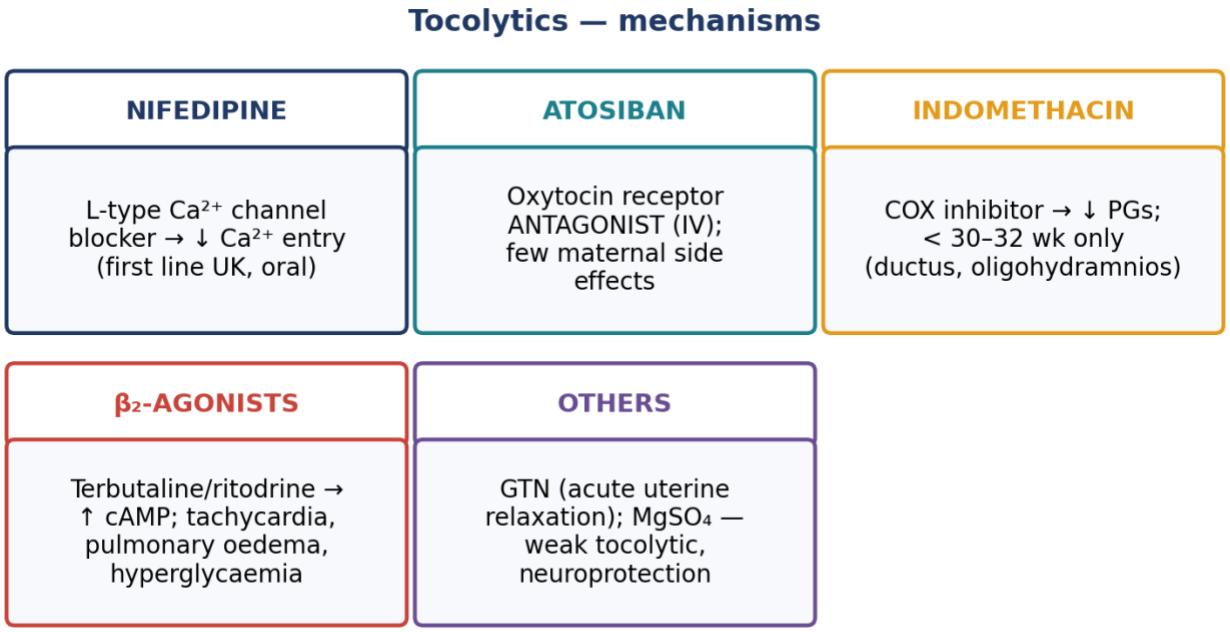


Figure 380.1 — Tocolytic mechanisms

- Tocolytics act on myometrial calcium handling: reduce Ca^{2+} influx (nifedipine), block oxytocin receptors (atosiban), increase cAMP (β_2-agonists) or reduce prostaglandin synthesis (indomethacin).
- No tocolytic has been shown to improve neonatal outcome directly — the aim is a short delay to allow antenatal corticosteroids, magnesium sulphate neuroprotection and in-utero transfer.

380.2 Use and cautions

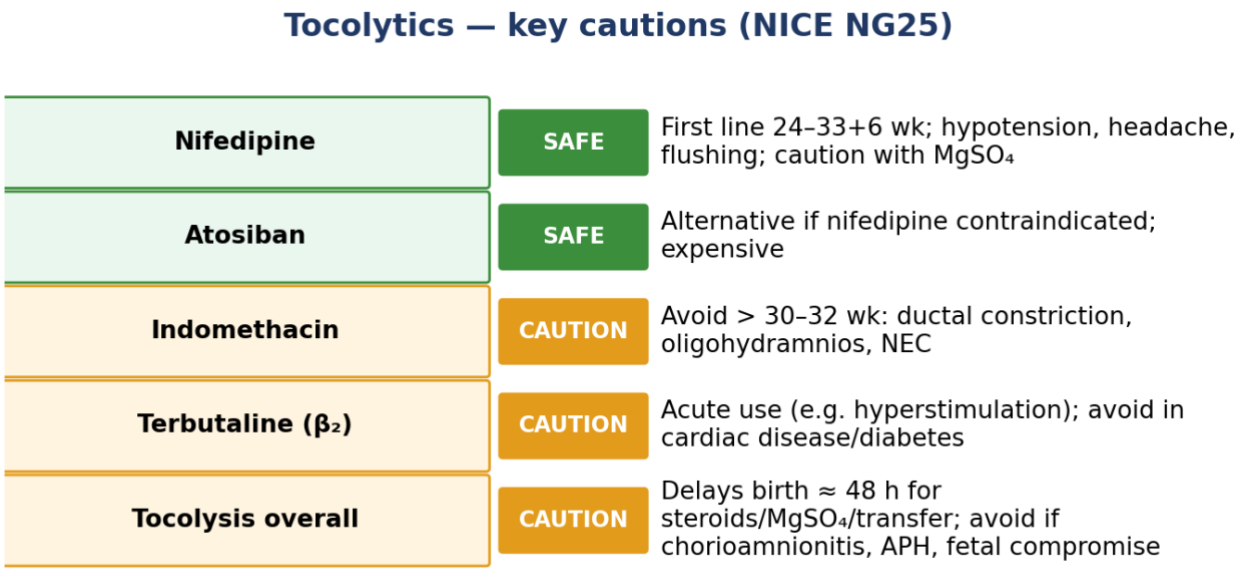


Figure 380.2 — Key cautions

Topic	Details
Indications	• Suspected/diagnosed preterm labour 24+0–33+6 weeks with intact membranes (NICE NG25) • Consider at 34–36 wk only exceptionally
Contraindications	• Chorioamnionitis/sepsis • Significant APH/abruption • Fetal compromise or death, lethal anomaly • Severe pre-eclampsia, advanced labour • Maternal cardiac disease (β-agonists)
Maintenance tocolysis	Not recommended
Acute tocolysis	• Uterine hyperstimulation with fetal bradycardia: **terbutaline 250 µg SC** (or GTN) • Stop oxytocin/remove prostaglandin
Uterine relaxation	GTN (sublingual/IV) — retained placenta, inversion, entrapped head at CS/breech
Combination risk	• Nifedipine + $MgSO_4$ — hypotension • β-agonists + steroids — hyperglycaemia, pulmonary oedema

380.3 Must-know summary

■ EXAM TIP

- Nifedipine (Ca^{2+} channel) first line; atosiban (OT antagonist) alternative.
- Indomethacin: ductal constriction, oligohydramnios — avoid > 30–32 wk.
- β_2-agonists: tachycardia, pulmonary oedema, hyperglycaemia.
- Aim: 48 h for steroids, $MgSO_4$, transfer; no maintenance tocolysis.

■ MNEMONIC / MEMORY AID

Tocolytics — 'NAIT': Nifedipine, Atosiban, Indomethacin, Terbutaline.