Drugs at a Glance: Abortifacients, Prostaglandins, Tocolytics, and Oxytocics

Generic/Trade Name	Routes and Dosage Ranges
Progesterone Antagonist	
Mifepristone (Mifeprex)	PO 600 mg as a single dose or smaller amounts for 4–7 d
Prostaglandins	
Carboprost tromethamine (Hemabate)	IM 250 mcg q1.5–3.5h, depending on uterine response, increased to 500 mcg per dose if uterine contractility is inadequate after several 250-mcg doses
Dinoprostone (Prostin E_2 vaginal suppository)	Intravaginally 20 mg, repeated q3–5h until abortion occurs
Misoprostol (Cytotec)	PO or intravaginally 200–400 mcg q12h for second trimester termination. Termination usually complete within 48 h
Tocolytics	
Ritodrine (Yutopar)	IV infusion 0.1 mg/min initially, increased by 50 mcg/min every 10 min to a maximal dose of 350 mcg/min if necessary to stop labor. The infusion should be continued for 12 h after uterine contractions cease. PO 10 mg 30 min before discontinuing the IV infusion, then 10 mg q2h for 24 h, then 10–20 mg q4–6h as long as necessary to maintain the pregnancy. Maximal oral dose, 120 mg daily
Terbutaline (Brethine)	
Magnesium sulfate	IV infusion 10 mcg/min, titrated up to a maximum dose of 80 mcg/min until contractions cease PO 2.5 mg q4–6h as maintenance therapy until term IV infusion, loading dose 3–4 g mixed in 5% dextrose injection and administered over 15–20 min. Maintenance dose 1–2 g/h, according to serum magnesium levels and deep tendon reflexes. PO 250–450 mg q3h, to maintain a serum level of 2.0–2.5 mEq/L.
Nifedipine (Procardia)	PO 10 mg every 20 min for 2–3 doses; maximum dose 40 mg in 1 h
Oxytocics	
Oxytocin (Pitocin)	During labor and delivery, IV 2 milliunits/min, gradually increased to 20 milliunits/min, if necessary, to produce three or four contractions within 10-min periods. Prepare solution by adding 10 units (1 mL) of oxytocin to 1000 mL of 0.9% sodium chloride or 5% dextrose in 0.45% sodium chloride. To control postpartum hemorrhage, IV 10–40 units added to 1000 mL of 0.9% sodium chloride, infused at a rate to control bleeding To prevent postpartum bleeding, IM 3–10 units (0.3–1 mL) as a single dose To promote milk ejection, topically, 1 spray of nasal solution to one or both nostrils 2–3 min before nursing After delivery of the placenta, IM, IV 0.2 mg; repeat in 2–4 h if bleeding is severe.
Methylergonovine maleate (Methergine)	To prevent excessive postpartum bleeding, PO 0.2 mg 2–4 times daily for 2–7 d, if necessary

levels and signs of hypermagnesemia (eg, decreased respiratory rate and hypotonia) is required.

DRUGS USED DURING LABOR AND DELIVERY AT TERM

At the end of gestation, labor usually begins spontaneously and proceeds through delivery of the neonate. In some instances, prostaglandin preparations (eg, Prepidil or Cervidil formulations of dinoprostone) are administered intravaginally to promote cervical ripening and induce labor. Drugs often used during labor, delivery, and the immediate postpartum period include oxytocics, analgesics, and anesthetics.

Oxytocics

Oxytocic drugs include oxytocin (Pitocin) and methylergonovine (see Drugs at a Glance Table). Oxytocin is a hormone produced in the hypothalamus and released by the posterior pituitary gland (see Chap. 23). Oxytocin stimulates uterine contractions to initiate labor and promotes letdown of breast milk to the nipples in lactation. Pitocin is a synthetic form used to induce labor at or near full-term gestation and to augment labor when uterine contractions are weak and ineffective. It also can be used to prevent or control uterine bleeding after delivery or to complete an incomplete abortion. It is contraindicated for antepartum use in the presence of fetal distress, cephalopelvic disproportion, preterm labor, placenta previa, previous uterine surgery, and severe preeclampsia. Methergine is used for management of postpartum hemorrhage related to uterine atony.

Analgesics

Parenteral opioid analgesics are used to control discomfort and pain during labor and delivery. They may prolong labor and cause sedation and respiratory depression in the mother