Hailey Potts
08/17/2023
MDWF 2070
Drug Protocol: Oxytocin

Drug: Oxytocin (Pitocin)

Indication(s) for Use in C.P.M. Practice: Oxytocin (Pitocin) is a sterile, clear, colorless aqueous solution of synthetic oxytocin, for intravenous infusion or intramuscular injection (FDA, n.d.). This can be used in the third stage of labor as a preventative measure for bleeding or as a frontline treatment measure to stop postpartum hemorrhaging (PPH). Active management is giving a dose of pitocin right after delivery of the baby without any indication of bleeding for preventing the likelihood of a PPH. Expectant management is when the natural release of oxytocin in the birther is supported. Pitocin is then indicated in that scenario with an active PPH. Postpartum hemorrhage is defined as the loss of more than 500 mL of blood after delivery and occurs in up to 18 percent of births (Anderson, 2007).

Mechanism of Action: Activation of oxytocin receptors on the myometrium triggers a downstream cascade that leads to increased intracellular calcium in uterine myofibrils which strengthens and increases the frequency of uterine contractions (DrugBank, n.d.). The contractions then help put pressure on bleeding vessels where the placenta was attached to your uterus stopping excessive blood flow or hemorrhaging.

Legal for use in your state/province: In the state of WA, midwives may obtain and administer Antihemorrhagic drugs to control postpartum hemorrhage including, but not limited to, intravenous tranexamic acid, oxytocin, misoprostol, methylergonovine maleate (oral or intramuscular), and prostaglandin F2 alpha (WAC 246-834-250, n.d.).

Form	Dose	Route of Administration	Administration instructions	Treatment notes
Vial 1ml	10 units	Intramuscular (IM)	This is administered by pulling up a whole vial (10 units of pitocin) with a 21g needle and syringe. Then pushing the air out of it so it is ready for administration. Then you would take an alcohol wipe and wipe the spot on their thigh muscle for administration to clean it, and give a 1,2,3, or say you will feel a quick poke, and then administer it directly into their thigh muscle at the cleaned spot.	Onset: 2-3 minutes Effective in 15-30 min Duration: 2-3 hours (King et al., 2018, p. 1121)
Vial 1ml	10-80 units	Intravenous (IV)	This is prepared by pulling up the 30-40 units of Pitocin from 3-4 vials using a 21g needle and syringe. Then grab a 250 or 500ml bag of .9% Saline (sodium chloride solution), or Lactated Ringer (Our preference). Also grab an IV tubing, Iv catheter and attachment, tourniquet,	Onset: Immediate Duration: 60 minutes (King et al., 2018, p. 1121)

			alcohol wipes, tegederm, tape, bandaid, gauze, and a 10ml NaCl syringe. puncture the IV tubing into the fluids and flood the line prior to medication being put in. Then administer the medication into the fluids and mark the bag accordingly. Hang the prepared bag and begin placing an IV. (Ideally, one is already placed prior or an assistant is doing this while fluids are being prepared). Prepare the saline flush and IV extension kit by flooding the extension. You would get the patient in a good position with easy access to their arm, if immediate administration is necessary place it in their peripheral intravenous line or the antecubital space, otherwise, try for a more comfortable location such as their dorso-radial area. Place the tourniquet on and begin feeling for a vein, once found, clean it with an alcohol wipe, using an 18g catheter for fast infusion place it directly into the vein and watch for flashback, advance the catheter and retract the needle while applying pressure to stop bleeding and release the tourniquet. Attach the flooded extension and push a test dose of 2-3ml of NaCl and see how it feels for the patient and feels to the touch. If flowing well, attach the IV fluids with medication in them and begin running at an open speed first then adjust the infusion rate to sustain uterine contraction and control uterine atony.	

Contraindications: For the use of PPH the only contraindications are patients with hypersensitivity to the drug (DrugBank, n.d.).

Adverse reactions/side effects: (King et al., 2018, p. 1121)

- Anaphylactic reaction
- Hyponatremia
- cramping

Storage: Store between 20° to 25°C (68° to 77°F) (FDA, n.d.)

References: Anderson, J. M. (2007, March 15). *Prevention and management of postpartum hemorrhage*. AAFP. https://www.aafp.org/pubs/afp/issues/2007/0315/p875.html#:~:text=Misoprostol%20is%20another%

20prostaglandin%20that%20increases%20uterine%20tone%20and%20decreases%20postpartum%20bleeding.&text=Misoprostol%20is%20effective%20in%20the,effects%20may%20limit%20its%20use.

King, T. L., Brucker, M. C., Osborne, K., & Jevitt, C. M. (2018). *Varney's Midwifery* (6th ed.). Jones & Bartlett Learning.

Oxytocin: package insert. (n.d.). Drugs.com. https://www.drugs.com/pro/oxytocin.html

Oxytocin: Uses, interactions, mechanism of action. (n.d.). DrugBank. https://go.drugbank.com/drugs/DB00107

Pitocin package insert. (n.d.). Food and Drug Administration. https://www.accessdata.fda.gov/drugsatfda_docs/label/2014/018261s031lbl.pdf

WAC 246-834-250: (n.d.). Washington State Legislature. https://app.leg.wa.gov/wac/default.aspx?cite=246-834-250