Drugs Acting on the Uterus
Drugs in Pregnancy and Delivery

- Excluding anesthetics and analgesics most drugs given in the per-natal period are given for their effect on the uterus.

- Goal: slow labor, induce labor
  - Promote well-being of mother and child
    - Oxytocics
    - tocolytics
Oxytocic Drugs: Action and Uses

- Oxytocin
  - Has uterine-stimulating properties, acts on smooth muscle of uterus, especially on pregnant uterus
  - Antidiuretic and vasopressor effects
  - Used to manage inevitable or incomplete abortion
Oxytocic Drugs: Action and Uses (cont’d)

• Ergonovine and methylergonovine
  – Uterine stimulants that increase strength, duration, and frequency of uterine contractions and decrease incidence of uterine bleeding

• Used to prevent postpartum and postabortal hemorrhage caused by uterine atony
Oxytocin Drugs: Adverse Reactions

- Oxytocin
  - Fetal bradycardia; uterine rupture; uterine hypertonicity, nausea, vomiting, cardiac arrhythmias, anaphylactic reactions

- Ergonovine and methylergonovine
  - Nausea; vomiting; elevated blood pressure; temporary chest pain; dizziness, water intoxication; headache
Oxytocic Drugs: Contraindications, Precautions, and Interactions

- Oxytocin
  - Contraindicated in patients with:
    - Known hypersensitivity to drug; cephalopelvic disproportion; unfavorable fetal position or presentation; obstetric emergencies; severe toxemia; hypertonic uterus
  - Administration of oxytocin with vasopressors
    - Severe hypertension may occur
Ergonovine and methylergonovine

- Ergonovine is contraindicated in patients with known hypersensitivity to the drug; hypertension; before delivery of the placenta.

- Used cautiously in patients with heart disease; obliterative vascular disease; renal or hepatic disease; during lactation.
Ergonovine and methylergonovine (cont’d)

- Methylergonovine is contraindicated in patients with known hypersensitivity to drug; hypertension; preeclampsia; should not be used to induce labor

- Used cautiously in patients with renal or hepatic impairment
Nursing Process: Assessment

• Preadministration assessment
  – Observe obstetric and general health history
  – Assess fetal heart rate; patient’s blood pressure, pulse, respiratory rate
  – Assess and record activity of uterus
  – Monitor uterine contractions for strength and duration of the contractions
Nursing Process: Assessment (cont’d)

- Ongoing assessment
  - Monitor patient’s blood pressure, pulse, respiratory rate
  - Notify primary health care provider if change in FHR or rhythm; frequency, rate, rhythm of uterine contractions; no palpable relaxation of uterus; increase or decrease in blood pressure or pulse; significant change in patient’s general condition
  - Report signs of water intoxication or fluid overload to primary health care provider
Nursing Process: Assessment (cont’d)

• Ongoing assessment (cont’d)
  – Monitor vital signs and note character and amount of vaginal bleeding when administering ergonovine and methylergonovine after delivery
  – Notify primary health care provider if necessary to discontinue use of drug if cramping is moderately severe to severe
Nursing Process: Implementation

- Promoting an optimal response to therapy
  - Oxytocin: Place patient in upright position, with squeeze bottle held upright; administer prescribed number of sprays to one or both nostrils

- Notify primary health care provider if milk drips from breast before or after breastfeeding or if milk drips from opposite breast during breastfeeding
Nursing Process: Implementation

- Promoting an optimal response to therapy (cont’d)
  - Ergonovine and methylergonovine: Administer ergonovine and methylergonovine at direction of primary health care provider
    - Administer drug slowly during period of 1 minute or more with close monitoring of patient’s blood pressure if drug is given IV
    - Briefly explain purpose of injection to patient
Nursing Process: Implementation

• Monitoring and managing patient needs
  – Anxiety
    • Explain purpose of IV infusion and expected results to patient
    • Spend time with patient, reassure to help to reduce anxiety
Nursing Process: Implementation

• Monitoring and managing patient needs (cont’d)

  – Risk for injury:

    • Provide emesis basin, cool towel for forehead if nauseated; notify primary health care provider if vomiting occurs

    • Place patient on left side and provide supplemental oxygen
Nursing Process: Implementation

- Monitoring and managing patient needs (cont’d)
  - Excess fluid volume
    - Measure fluid intake and output
    - Observe patient for signs of fluid overload
  - Pain
    - Report persistent or severe cramping to primary health care provider
Nursing Process: Implementation

- Educating the patient and family
  - Answer questions that patient may have regarding treatment; instruct patient to report any adverse reactions
  - Inform patient, family about therapeutic response during administration of drug
  - If nasal spray is to be used, teach patient proper technique
Nursing Process: Evaluation

- The therapeutic effect is achieved, normal labor is initiated
- Adverse reactions are managed effectively
- No evidence of fluid volume excess is seen
- The patient is knowledgeable regarding the therapeutic regimen
Tocolytics: Actions and Uses

- Magnesium sulfate
  - Works to decrease the force of uterine contractions
  - Used to manage preterm labor in pregnancies of greater than 27 weeks’ gestation
Nursing Process: Assessment

- Preadministration assessment
  - Obtain patient’s vital signs before starting IV infusion containing tocolytic drug
  - Auscultate lung sounds to provide baseline assessment
Nursing Process: Assessment (cont’d)

- Ongoing assessment
  - Obtain blood pressure, pulse, respiratory rate
  - Monitor FHR
  - Check IV infusion rate
  - Examine area around IV needle insertion site for signs of infiltration
  - Monitor uterine contractions
  - Measure maternal intake and output
Nursing Process: Nursing Diagnosis

- Anxiety
- Impaired gas exchange
Nursing Process: Planning

- Expected outcomes
  - An optimal response to therapy
  - Reduction in anxiety
  - Understanding of treatment of preterm labor
Terbutaline

- Classification: β-adrenergic receptor agonist; bronchodilator
- Uses: Bronchodilator
  - Off label use: delay delivery in preterm labor
- Action: promotes relaxation of smooth muscle
- Use Cautiously: HTN, hx seizures, kidney or liver dysfunction, DM, stroke
- Adverse Effects: Nervousness, tremor, lightheadedness, tachycardia, palpitations, fetal tachycardia