

and neonate. Meperidine may cause less neonatal depression than other opioid analgesics. Butorphanol is widely used. If neonatal respiratory depression occurs, it can be reversed by naloxone (Narcan).

Duramorph is a long-acting form of morphine that provides analgesia up to 24 hours after injection into the epidural catheter at the completion of a cesarean section.

Regional analgesia is achieved by the epidural injection of opioids (eg, fentanyl) or preservative-free morphine. Possible side effects include maternal urinary retention, but no significant effects on the fetus.

Anesthetics

Local anesthetics also are used to control discomfort and pain. They are injected by physicians for regional anesthesia in the pelvic area. Epidural blocks involve injection into the epidural space of the spinal cord. Bupivacaine is commonly used. With regional anesthesia, the mother is usually conscious and comfortable, and the neonate is rarely depressed. Fentanyl may be combined with a small amount of an anesthetic drug for both analgesia and anesthesia. No significant effects on the fetus occurred in clinical studies.

NEONATAL THERAPEUTICS

In the neonate, any drug must be used cautiously. Drugs are usually given less often because they are metabolized and excreted slowly. Immature liver and kidney function prolongs drug action and increases risks of toxicity. Also, drug therapy should be initiated with low doses, especially with drugs that are highly bound to plasma proteins. Neonates have few binding proteins, which leads to increased amounts of free, active drug and increased risk of toxicity. When the health care provider is assessing the neonate, drugs received by the mother during pregnancy, labor and delivery, and lactation must be considered.

At birth, some drugs are routinely administered to prevent hemorrhagic disease of the newborn and ophthalmia neonatorum. Hemorrhagic disease of the newborn occurs because the intestinal tract lacks the bacteria that normally synthesize vitamin K. Vitamin K is required for liver production of several clotting factors, including prothrombin. Thus, the neonate is at increased risk of bleeding during the first week of life. One dose of phytonadione 0.5 to 1 mg is injected at delivery or on admission to the nursery.

Ophthalmia neonatorum is a form of bacterial conjunctivitis that may cause ulceration and blindness. It may be caused by several bacteria, most commonly *Chlamydia trachomatis*, a sexually transmitted organism. Erythromycin ointment 0.5% is applied to each eye at delivery. It is effective against both chlamydial and gonococcal infections.

Nursing Process

Assessment

Assess each female client of reproductive age for possible pregnancy. If the client is known to be pregnant, assess status in relation to pregnancy, as follows:

- Length of gestation
- Use of prescription, over-the-counter, herbal, nontherapeutic, and illegal drugs
- Acute and chronic health problems that may influence the pregnancy or require drug therapy
- With premature labor, assess length of gestation, the frequency and quality of uterine contractions, the amount of vaginal bleeding or discharge, and the length of labor. Also determine whether any tissue has been expelled from the vagina. When abortion is inevitable, oxytocics may be given. When stopping labor is possible or desired, a tocolytic may be given.
- When spontaneous labor occurs in normal, full-term pregnancy, assess frequency and quality of uterine contractions, amount of cervical dilatation, fetal heart rate and quality, and maternal blood pressure.
- Assess antepartum women for intention to breastfeed.

Nursing Diagnoses

- Risk for Injury: Damage to fetus or neonate from maternal ingestion of drugs
- Noncompliance related to ingestion of nonessential drugs during pregnancy
- Risk for Injury related to possible damage to mother or infant during the birth process
- Deficient Knowledge: Drug effects during pregnancy and lactation

Planning/Goals

The client will:

- Avoid unnecessary drug ingestion when pregnant or likely to become pregnant
- Use nonpharmacologic measures to relieve symptoms associated with pregnancy or other health problems when possible
- Obtain optimal care during pregnancy, labor and delivery, and the postpartum period
- Avoid behaviors that may lead to complications of pregnancy and labor and delivery
- Breast-feed safely and successfully if desired

Interventions

- Use nondrug measures to prevent the need for drug therapy during pregnancy.
- Provide optimal prenatal care and counseling to promote a healthy pregnancy (eg, regular monitoring of blood pressure, weight, blood sugar, urine protein, and counseling about nutrition and other health-promoting activities).
- Help clients and families cope with complications of pregnancy, including therapeutic abortion.