

MIDWIFERY

Diseases Associated with Pregnancy

In-depth Study Notes for Loksewa- ANM & SN

5.5 Diseases Associated with Pregnancy

Pregnancy is a critical physiological period that imposes numerous changes on the body. Some diseases can occur during pregnancy, either pre-existing or pregnancy-induced, which can affect the health of both the mother and the fetus. Early identification and management of these conditions are essential to reduce maternal and fetal morbidity and mortality.

1. Hypertensive Disorders of Pregnancy

Hypertensive disorders are one of the most common pregnancy complications and can have severe outcomes for both the mother and fetus. These disorders include preeclampsia, eclampsia, and gestational hypertension.

- **Preeclampsia:** This condition typically develops after the 20th week of pregnancy and is characterized by high blood pressure and protein in the urine. It can lead to complications such as organ damage, premature birth, and placental abruption.
 - **Symptoms:** High blood pressure (BP > 140/90), proteinuria, swelling in the face and hands, headaches, blurred vision, and upper abdominal pain.
 - **Management:** Early detection is critical. Management involves blood pressure control (usually with antihypertensive medications), monitoring for signs of worsening preeclampsia (such as seizures or organ damage), and early delivery if necessary, especially after 37 weeks.
- **Eclampsia:** Eclampsia is the progression of preeclampsia, where the mother experiences seizures. It can lead to maternal and fetal death if not controlled.
 - **Symptoms:** Seizures, severe headache, visual disturbances, and high BP.
 - **Management:** Immediate delivery of the baby, typically through induction or Cesarean section. Magnesium sulfate is given to prevent further seizures.
- **Gestational Hypertension:** Occurs when high blood pressure develops during pregnancy but without proteinuria. It can lead to preeclampsia if left untreated.
 - **Symptoms:** High blood pressure without protein in the urine.
 - **Management:** Monitoring of blood pressure, rest, and sometimes antihypertensive medications.

Prevention and Monitoring: Regular prenatal visits to check blood pressure, urinalysis for protein, and fetal monitoring.

2. Gestational Diabetes

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Gestational diabetes (GDM) is a form of diabetes that develops during pregnancy and typically resolves after delivery, though it increases the risk of developing type 2 diabetes later in life.

- **Causes and Pathophysiology:** The placenta produces hormones that can interfere with insulin function, leading to elevated blood glucose levels. Women with predisposing factors such as obesity, age, and a family history of diabetes are at higher risk.
- **Symptoms:** Increased thirst, frequent urination, fatigue, blurred vision, and increased hunger.
- **Diagnosis:** A blood test called the oral glucose tolerance test (OGTT) is used to diagnose GDM during the second trimester.
- **Management:** Lifestyle changes such as diet and exercise are the first line of treatment. Insulin therapy or oral medications may be required for some women.

Complications of Untreated GDM: Macrosomia (large baby), preterm birth, hypoglycemia in the newborn, and higher risk of type 2 diabetes in the mother.

3. Anemia in Pregnancy

Anemia, often caused by iron deficiency, is one of the most common conditions during pregnancy. It can lead to fatigue, decreased oxygen delivery to the fetus, and premature birth.

- **Causes:** Iron deficiency is the most common cause of anemia, but folic acid or vitamin B12 deficiencies can also contribute.
- **Symptoms:** Fatigue, pallor, dizziness, shortness of breath, and headache.
- **Diagnosis:** Blood tests, including hemoglobin and hematocrit levels, are used to diagnose anemia.
- **Management:** Iron supplementation is the mainstay of treatment. In some cases, intravenous iron may be required.

Complications of Severe Anemia: Preterm delivery, low birth weight, and poor neonatal outcomes.

4. Urinary Tract Infections (UTIs)

Pregnancy increases the risk of urinary tract infections due to changes in the urinary system, including the effects of hormones and the growing uterus, which can obstruct urine flow.

- **Symptoms:** Painful urination, frequent urination, cloudy or bloody urine, pelvic discomfort.
- **Complications:** If untreated, UTIs can lead to kidney infections, preterm labor, and low birth weight.
- **Management:** Antibiotics that are safe for pregnancy (e.g., amoxicillin) are used to treat UTIs. Frequent urination and good hygiene practices are recommended for prevention.

5. Infections During Pregnancy

Certain infections can affect both maternal and fetal health. The most common infections include:

- **Rubella (German Measles):** A viral infection that can cause birth defects such as deafness, blindness, and intellectual disability if contracted in the first trimester. Vaccination before pregnancy is the best prevention.
- **Toxoplasmosis:** Caused by a parasite found in undercooked meat and cat litter. It can cause severe neurological damage to the fetus.
- **Zika Virus:** Transmitted by mosquitoes, Zika virus infection during pregnancy can cause microcephaly and other serious birth defects.

Prevention: Vaccination (rubella), proper food handling, avoiding exposure to infected animals or individuals, and using mosquito repellent during travel.

5.6 Care of Newborn Baby with Observation and Assessment

Proper care and observation are crucial for ensuring the health and well-being of a newborn. The following practices are essential for effective newborn care.

1. Immediate Care Post-Birth

- **Drying and Warming:** The baby should be dried immediately after birth to prevent hypothermia. Newborns are at high risk of losing heat, so they should be wrapped in warm blankets.
- **Apgar Scoring:** The Apgar score is a quick method used to assess the newborn's physical condition at 1 and 5 minutes after birth.
 - **Scoring Criteria:**
 - **Appearance (skin color):** 0 (blue/pale), 1 (pink body, blue extremities), 2 (completely pink)
 - **Pulse (heart rate):** 0 (no pulse), 1 (less than 100 bpm), 2 (more than 100 bpm)
 - **Grimace (response to stimulation):** 0 (no response), 1 (grimace), 2 (crying)
 - **Activity (muscle tone):** 0 (limp), 1 (some flexion), 2 (active motion)
 - **Respiration:** 0 (no breathing), 1 (weak cry), 2 (strong cry)

A score of 7 or higher is considered normal, while a score of less than 7 indicates the need for further medical attention.

2. Breastfeeding and Nutrition

- **Breastfeeding:** Newborns should begin breastfeeding within the first hour of life. Breast milk provides essential nutrients and antibodies that protect the infant from infections.
- **Benefits of Breastfeeding:**
 - **Nutritional:** Provides ideal nutrition, containing all the nutrients a newborn needs.
 - **Immunological:** Passes antibodies from mother to baby, boosting the baby's immune system.
 - **Psychological:** Promotes bonding between mother and baby.

3. Monitoring Vital Signs

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- **Temperature:** Newborns are highly susceptible to temperature changes. Normal body temperature should be between 36.5°C and 37.5°C.
- **Heart Rate:** The normal range is 120-160 beats per minute.
- **Respiratory Rate:** A newborn's breathing rate should be between 30-60 breaths per minute.
- **Blood Oxygen Levels:** Monitoring oxygen levels in the blood is important to detect respiratory issues.

4. Umbilical Cord Care

- The umbilical cord stump should be kept clean and dry. It naturally dries and falls off within the first two weeks.
- **Signs of Infection:** Redness, swelling, or discharge from the umbilical stump area may indicate infection and should be evaluated by a healthcare provider.

5. Reflexes and Behavioral Observations

- **Moro Reflex (Startle Reflex):** The baby's arms and legs extend when startled, followed by rapid flexion.
- **Rooting Reflex:** The baby turns its head and opens its mouth when the cheek is stroked, helping the baby find the breast to latch.
- **Grasp Reflex:** The baby automatically grips an object placed in the palm of its hand.

6. Newborn Screening

- **Metabolic Screening:** Blood tests for rare but treatable disorders like phenylketonuria, hypothyroidism, and sickle cell disease.
- **Hearing Screening:** Routine hearing tests help identify early signs of hearing loss, which is crucial for language development.

5.7 Breast Care and Management

Breast care during pregnancy and breastfeeding is essential to prevent discomfort and complications, such as mastitis or nipple cracks.

1. Prenatal Breast Care

- **Preparation:** Before birth, women should be educated about the importance of breastfeeding and proper techniques. Gentle massage and moisturizing can help prepare the nipples for breastfeeding.
- **Hygiene:** The breasts should be cleaned with warm water. Avoid soaps or harsh detergents that can dry out the skin and cause irritation.

2. Common Breastfeeding Problems

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- **Nipple Cracks:** Cracked or sore nipples are common and are usually caused by improper latch. Ensuring that the baby latches correctly is key to preventing this.
- **Engorgement:** Occurs when the breasts become overly full of milk, causing discomfort and swelling. Frequent breastfeeding or expressing milk can help relieve the pressure.
- **Mastitis:** A bacterial infection of the breast tissue, causing swelling, redness, and pain. It requires antibiotics and continued breastfeeding to clear the infection.

3. Managing Breastfeeding

- **Positioning:** Ensuring the baby latches correctly is essential to prevent nipple pain and ensure effective milk transfer. Various positions, such as the cradle hold, cross-cradle hold, and football hold, can be used to find the most comfortable one.
- **Maintaining Milk Supply:** Frequent breastfeeding, hydration, and adequate nutrition are crucial to maintaining an adequate milk supply.

4. Weaning and Introduction of Solid Foods

- **Weaning:** The gradual introduction of formula or solid foods can begin around six months of age, while breastfeeding continues.
- **Signs of Readiness for Weaning:** The baby shows interest in food, can sit up with support, and has lost the tongue-thrust reflex.