

# Anemia during pregnancy

By: Uz :wamda kamal



# Content :

- ❖ **Definition of anemia .**
- ❖ **Types of anemia .**
- ❖ **Iron deficiency anemia (definition , clinical manifestation, treatment and nursing management ) .**
- ❖ **Thalassemia (definition , clinical manifestation , treatment and nursing management ) .**
- ❖ **Sickle cell anemia (definition , clinical manifestation , treatment and nursing management ) .**

# Objectives :

- **By the end of this lecture the student will be able to:**
- **Define anemia and it's types .**
- **Explain clinical manifestation , treatment and nursing management of each type .**

*When a woman discovers that she is pregnant she must remember to Protect and nourish the fetus by making wise choices.*

# Anemia :

- **A reduction in red blood cell volume, is measured by hematocrit (hct) or a decrease in the concentration of hemoglobin (hgb) in the peripheral blood.**

# Count...

- **This results in reduced capacity of the blood to carry oxygen to the vital organs of the mother and fetus.**
- **Anemia is a sign of an underlying problem but does not indicate its origin. In women, hgb below 12 g/100 ml or hct below 37% indicates anemia . during pregnancy, anemia increases the risk of **preterm birth, infections, low birthweight, and perinatal mortality and delayed healing.****

# **Iron Deficiency Anemia**

# Iron Deficiency Anemia :

- **Iron deficiency anemia affects one in four pregnancies and is usually caused by inadequate dietary intake of iron.**



**• It is a very common state in pregnant women and can be caused by a variety of factors, including :**

- 1. Poor nutrition .**
- 2. Hemolysis .**
- 3. Pica (consuming non-food substances) .**
- 4. Multiple gestation .**
- 5. Blood loss .**

# Clinical Manifestations :

## ➤ Iron deficiency anemia presents with :

1. **Fatigue, weakness, malaise and anorexia .**
2. **Susceptibility to infection (frequent colds) .**
3. **Pale mucus membranes .**
4. **Tachycardia, and pallor .**
5. **Laboratory studies usually reveal low hgb (<11 g/dl), low hct (<35%), low serum iron level (<30 ug/dl) low serum ferritin level (<100 mg/dl).**

# Treatment :

- **The goals of treatment for iron deficiency anemia in pregnancy are to eliminate symptoms, correct the deficiency, and replenish iron stores. Early and daily administration of prenatal vitamins and iron is recommended .**

# Nursing Management :

- **Since the treatment of iron deficiency anemia is pharmacologic and dietary in nature, the nurse's role is to encourage compliance with drug therapy and provide dietary instruction about the intake of foods high in iron .**

# Teaching for the Woman with Iron Deficiency Anemia :

- **Take your prenatal vitamin daily; if you miss a dose, take it as soon as you remember.**
- **For best absorption, take iron supplement between meals.**
- **Avoid taking iron supplement with coffee, tea, chocolate, and high-fiber food.**
- **Eat foods rich in iron, such as:**
- **Meats, green leafy vegetables, legumes, dried fruits, whole grains Peanut butter, bean dip, whole-wheat fortified breads and cereals .**

# Count...

- **For best iron absorption from foods, consume the food along with a food high in vitamin C.**
- **Increase your exercise, fluids, and high-fiber foods to reduce constipation.**
- **Plan frequent rest periods during the day.**

# Count...

- **Taking iron on an empty stomach improves its absorption, but many women cannot tolerate the gastrointestinal discomfort it causes. In such cases, taking it with meals is advised. Adverse effects are predominantly gastrointestinal and include gastric discomfort, nausea, vomiting, anorexia, diarrhea, metallic taste, and constipation. Taking the iron supplement with meals and increasing intake of fiber and fluids will typically overcome the most common side effects.**

# Thalassemia



# Thalassemia :

- **Thalassemia is a group of hereditary anemias in which synthesis of one or both chains of the hemoglobin molecule (alpha and beta) is defective.**

# Count...

- **Thalassemia minor has little effect on the pregnancy, although the woman will have mild, persistent anemia. This anemia does not respond to iron therapy, and iron supplements should not be prescribed. Women with thalassemia major do not usually become pregnant because of lifelong severe hemolysis, anemia, and premature death .**

# Management of thalassemia :

- **Management of thalassemia during pregnancy depends on the severity of the disease. Identification and screening are important to plan care.**
- **Nurses should provide supportive care and expectant management throughout the pregnancy.**

# **Sickle Cell Anemia**

# Sickle Cell Anemia :

- **Sickle cell anemia is an autosomal recessive inherited condition that results from a defective hemoglobin molecule (hemoglobin S).**

# Count...

- **In the human body, the hemoglobin molecule serves as the oxygen-carrying component of the red blood cells. Most people have several types of circulation hemoglobin (HbA and HbA2) that make up the majority of their circulatory system. In sickle cell disease, the abnormal hemoglobin S (HbS) replaces HbA and HbA2. This abnormal hemoglobin (HbS) becomes sickle-shaped when it isn't fully saturated with oxygen.**

# Count...

- **Subsequently, it begins to build up in the capillaries and smaller blood vessels, making blood more viscous. These sickle cells clump together, clogging the small blood vessels. As a result, hypoxia occurs and leads to a crisis.**
- **In addition, sickle cells have a shorter life span (10 to 20 days) than the normal red blood cell (120 days).**

# Count...

- **Sickle cell anemia during pregnancy is associated with more severe anemia and frequent vaso-occlusive crises, with increased maternal and perinatal morbidity and mortality .**



# Clinical Manifestations :

➤ **Women with sickle cell anemia present with :**

☐ **Anorexia, dyspnea, malaise, and pallor.**

➤ **If in sickle cell crisis, the woman will report**

- 1. Severe abdominal pain .**
- 2. Muscle spasms, leg pains and joint pain .**
- 3. Fever, stiff neck .**
- 4. Nausea and vomiting,**
- 5. Seizures .**

# Treatment :

- **Ideally, women with hemoglobinopathies are screened before conception and are made aware of the risks of sickle cell anemia to themselves and to the fetus .**
- **A blood Hgb electrophoresis is done for all women at their first prenatal visit to determine the types and percentages of Hgb present. This information should help them in making future reproductive decisions.**

# Count...

- **Treatment depends on the health status of the woman**  
**During pregnancy, only supportive therapy is used: blood transfusions for severe anemia, analgesics for pain, and antibiotics for infection.**

# **Nursing Management :**

- **Clients require emotional support, education, and follow up care to deal with this chronic condition, which has a great impact on them and their families .**

# **Nursing care of women with sickle cell anemia includes:**

- Educate the client to avoid infection exposure, cigarette smoking, alcohol consumption, and temperature extremes.**
- Monitor laboratory test results.**
- Assess hydration status at each visit and urge the client to drink 8 to 10 glasses of fluid daily to prevent dehydration.**
- Monitor vital signs, fetal heart rate and fetal growth.**

# Count...

- **Assess for early signs of crisis.**
- **Schedule frequent fetal well-being assessments, such as biophysical profiles, nonstress tests, and contraction stress tests.**
- **Encourage rest and pain management during labor.**
- **Prevent infection during the postpartum period by meticulous handwashing.**
- **Discuss family planning options to control fertility.**

➤ **Nursing Diagnosis ??????**

**Any question ?????**