RAMA UNIVERSITY

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FACULTY OF NURSING

SICKLE CELL ANEMIA

Tushar Noel
Nursing Tutor
R.C.N

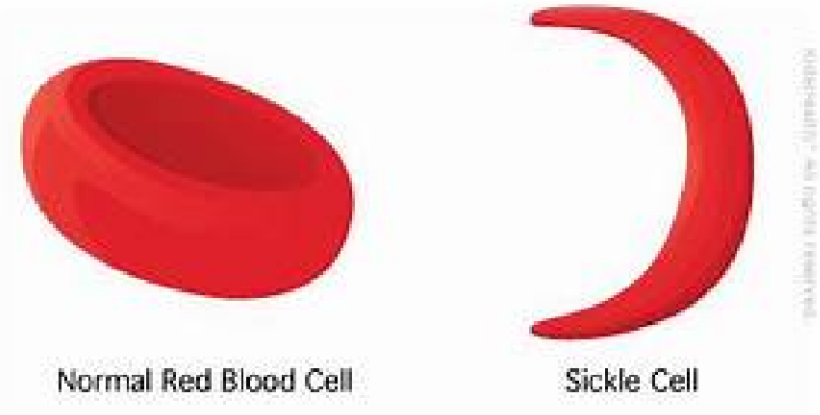
Introduction

Sickle cell disease involves the red blood cells, or hemoglobin, and their ability to carry oxygen. Normal hemoglobin cells are smooth, round, and flexible, like the letter "O," so they can move through the vessels in our bodies easily. Sickle cell hemoglobin cells are stiff and sticky, and form into the shape of a sickle, or the letter "C," when they lose their oxygen.

Definition

Sickle cell disease is an inherited blood disorder characterized by defective hemoglobin (a protein in red blood cells that carries oxygen to the tissues of the body).

Sickle cells only live for about 10 to 20 days, while normal hemoglobin can live up to 120 days. Also, sickle cells risk being destroyed by the spleen because of their shape and stiffness.



Causes

- Genetic mutation
- Chromosomal abnormality (11^{th})
- Parasite that causes malaria

Symptoms

- Anemia
- Pain crisis, or sickle crisis.
- Stroke
- Jaundice
- Vision problems
- Delayed growth or puberty
- **Priapism** (An obstruction of the penis by sickle cells)

Major organs are affected by sickle cell disease. The liver, heart, kidneys, gallbladder, eyes, bones, and joints. Problems may include the following:

- Increased infections
- Leg ulcers
- Bone damage
- Early gallstones
- Kidney damage and loss of body water in the urine
- Eye damage

Diagnostive Evaluation

- History collection
- Physical examination
- CBC count
- Blood test (testing babies for abnormalities of hemoglobin)

Treatment

Early diagnosis and prevention of complications is critical in sickle cell disease treatment. Treatment options may include, but are not limited to:

- Pain medications (for sickle cell crises)
- Drinking plenty of water daily (eight to 10 glasses) or receiving fluid intravenously (to prevent and treat pain crises)

- Blood transfusions
- Penicillin (to prevent infections)
- Folic acid (to help prevent severe anemia)
- Hydroxyurea (The long-term effects of the medication are unknown.)
- Bone marrow transplant


THANK
YOU