# 4 Sickle Cell Anemia

**Patient name:** _____ **Admission:** _____

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**I. The client/caregiver can define sickle cell anemia.**

A. The red blood cells, normally disc shaped, become crescent shaped.
B. They do not function correctly and can cause small blood clots. This can result in sickle cell pain crisis.
C. It is an inherited disease. Genetic counseling is recommended for all carriers of sickle cell disease.
D. It is much more common in African Americans. One in 12 African Americans have a sickle cell trait.

**II. The client/caregiver can list symptoms of sickle cell anemia.**

A. They are
- Yellow eyes/skin and/or jaundice
- Paleness
- Fatigue
- Breathlessness
- Rapid heart rate
- Delayed growth and puberty
- Greater susceptibility to infections
- Ulcers on lower legs (adolescents and adults)
- Bone pain
- Fever
- Attacks of abdominal pain

B. They may also have
- Bloody urine
- Frequent urination
- Excessive thirst
- Chest pain
- Poor eyesight/blindness

**III. The client/caregiver can define and list symptoms of sickle cell pain crisis.**

A. Sickle cell disease is present at birth. Symptoms usually do not occur until after 4 months of age.

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B. The malformed cells can block blood vessels and damage organs, resulting in "crisis." This can be life threatening.
C. The three types of "crisis" are as follows:
1. Hemolytic crisis (damaged red blood cells break down)
2. Splenic sequestration crisis (spleen enlarges and traps blood cells)
3. Aplastic crisis (infection causes bone marrow to stop producing red blood cells
D. These painful crises can last from hours to days. Some episodes can require hospitalization for hydration and pain control.
E. Pain is in bones of back, chest, and long bones (such as femur or thigh).

**IV. The client/caregiver can define complications of untreated sickle cell disease.**

A. Complication of untreated or poorly managed sickle cell disease can result in
- Multisystem disease and failure (kidney, liver, lung, and spleen)
- Recurrent crises resulting in severe anemia and gallstones
- Narcotic abuse
- Joint destruction
- Blindness/visual impairment
- Central nervous system (neurologic symptoms and stroke)
- Infection, including pneumonia, cholecystitis (gallbladder), osteomyelitis (bone), and urinary tract infections

**V. The client/caregiver can list treatment measures for sickle cell anemia/crisis.**

A. Treatment and medical supervision should be ongoing.
B. Folic acid supplements are used.
C. During sickle crisis, pain control and adequate fluid intake are required.

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D. Antibiotics and vaccines are used to prevent bacteria infections.
E. Psychosocial counseling is important.
F. Specific actions to prevent crises are to avoid the following:
   - Strenuous physical activity, especially if the spleen is enlarged
   - Emotional stress
   - Environments with low oxygen content (high altitudes, etc.)
   - Known sources of infection

## RESOURCES

American Sickle Cell Anemia Association
*www.ascaa.org*

Support groups

Mental health counseling

Genetic counseling

## REFERENCES

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