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Perspective

Complications of Sickle Cell Anemia

Michael Catherine*

Department of Internal Medicine, Philipps University of Marburg, Marburg, Germany

DESCRIPTION

Sickle cell anemia, or Sickle Cell Disease (SCD), is a hereditary disease of Red Blood Cells (RBC). RBCs are usually disk-shaped and can move flexibly even with the smallest blood vessels. However, in this disease, red blood cells have abnormal sickle cells that resemble sickle cells. This makes it sticky and stiff, making it easier to get trapped in small blood vessels and preventing blood from reaching different parts of the body. This can lead to pain and tissue damage. SCD is an autosomal recessive disorder. You need two copies of the gene to get sick. If there is only one copy of the gene, it is said to have a sickle cell trait. Symptoms of sickle cell anemia usually appear at a young age. They can appear in 4-month-old babies, but generally around 6 months. There are several types of SCDs, but they all share similar symptoms of varying severity. These include excessive malaise or irritation, anemia, restlessness in the baby, bed wetness, associated kidney problems, jaundice, which is yellowing of the eyes and skin, swelling and pain in the limbs, frequent infections, Chest, back pain, arms or legs.

COMPLICATIONS OF SICKLE CELL ANEMIA

SCD can cause serious complications that occur when sickle cells block blood vessels in different parts of the body. Painful or damaging obstructions are called sickle cell disease. They can be caused by a variety of situations, including illness, changes in body temperature, stress, poor hydration, and altitude.

The following are types of complications that can result from sickle cell anemia.

Severe anemia

Anemia is a lack of red blood cells. The sickle cells are slightly broken. This breakdown of red blood cells is called chronic hemolysis. RBCs generally live about 120 days. Sickle cells live up to 10-20 days.

Hand-foot syndrome

Hand-foot syndrome occurs when crescent-shaped red blood cells block blood vessels in the hands and feet. This causes the limbs to swell. It can also cause leg ulcers. Swelling of the limbs is often the first sign of sickle cell anemia in the baby.

Splenic sequestration

Spleen isolation is obstruction of spleen blood vessels by sickle cells. It causes a sudden and painful enlargement of the spleen. Due to complications of sickle cell disease, it may be necessary to remove the spleen through a procedure called splenectomy. In some patients with sickle cell disease, the spleen is so damaged that it contracts and becomes completely non-functional. This is called an automatic splenectomy. Patients without a spleen are at increased risk of infection with bacteria such as streptococcus, hemophilus, and *salmonella.*

Delayed growth

Growth retardation is common in people with SCD. Children are generally small, but regain their size in adulthood. Sexual maturity can also be delayed. This happens because the sickle cell RBC cannot supply enough oxygen and nutrients.

Neurological complications

Seizures, strokes, and even coma can result from sickle cell anemia. They are caused by blocks of the brain. Prompt treatment should be required.

Eye problems

Blindness is caused by obstruction of the blood vessels that supply the eyes. This can damage the retina.

Skin ulcers

Skin ulcers on the legs can occur when small blood vessels are blocked.

Heart disease and chest syndrome

Since SCD interferes with blood oxygen supply, it can also cause heart problems which can lead to heart attacks, heart failure, and abnormal heart rhythms.

Lung disease

Over time lung damage associated with decreased blood flow can lead to lung hypertension (pulmonary hypertension) and lung scarring (pulmonary fibrosis). These problems can appear early in patients with sickle-chest syndrome. Damage to the lungs makes it difficult for the lungs to carry oxygen to the blood, and sickle cell disease can occur more often.

Priapism

Priapism is a persistent, painful erection found in some men with

Correspondence to: Michael Catherine, Department of Internal Medicine, Philipps University of Marburg, Marburg, Germany, E-mail: michaelcatherine@gmail.com

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sickle cell anemia. This happens when the blood vessels in the penis are blocked. If left untreated, it can lead to impotence.

Gallstones

Gallstones are one complication that is not caused by a vessel blockage. Instead, they are caused by the breakdown of RBCs. A byproduct of this breakdown is the bilirubin. High levels of bilirubin can lead to gallstones. These are also known as pigment stones.

Sickle chest syndrome

Sickle cell syndrome is a severe form of sickle cell disease. It causes severe chest pain and is accompanied by symptoms such as coughing, fever, sputum production, shortness of breath, and low blood oxygen levels. Abnormalities seen on chest X-rays may indicate either pneumonia or death of lung tissue (pulmonary infarction). Patients with sickle cell syndrome have a worse long-term prognosis than those who do not have.