ISSN: 2155-9864
Journal of Blood Disorders & Transfusion

OPEN ACCESS Freely available online

Opinion Article

The Significance of Sickle Cell Disease and its Comorbidities

Opoka Batte*

Department of Medicine, Indiana University School of Medicine, Indiana, USA

DESCRIPTION

A collection of genetic red blood cell diseases is known as Sickle Cell Disease (SCD). If have SCD, there is a problem with the hemoglobin. Red blood cells contain a protein called hemoglobin, which transports oxygen throughout the body. Within the red blood cells with SCD, the hemoglobin crystallizes into rigid rods. The red blood cells' shape is altered as a result. The cells transform from their intended disc shape to a crescent, or sickle, shape as a result.

The sickle-shaped cells are rigid and difficult to shape-change. As they pass through the blood arteries, many of them split apart. Instead of the typical 90 to 120 days, sickle cells often only endure 10 to 20 days. To make enough new cells to replace the ones lost, the body could struggle and could not have enough red blood cells as a result. Anemia is a disorder that might make feel exhausted.

Additionally, the sickle-shaped cells have the ability to adhere to vessel walls, resulting in a blockage that slows or halts blood flow. This prevents oxygen from getting to the tissues in the area. Pain crises, also known as rapid, intense pain episodes, can be brought on by a shortage of oxygen. These assaults could happen suddenly and people might need to visit the hospital for treatment.

Sickle cell anemia symptoms typically start to show about 6 months of age. They can evolve over time and differ from person to person.

Warning signs and symptoms of sickle cell disease

Anemia: Sickle cells easily disintegrate and expire. Red blood cells typically last 120 days or so before needing to be replaced. However, a lack of red blood cells results from sickle cells, which normally expire in 10 to 20 days (anemia). Fatigue results from the body's inability to obtain enough oxygen if there are not enough red blood cells.

Aches and pains: One of the main signs of sickle cell anemia are recurrent episodes of excruciating pain, sometimes known as pain crises. Red blood cells with sickle shapes obstruct blood flow to people joints, belly, and chest, causing pain. The duration and intensity of the pain might range from a few hours to many days. Only a few pain crises occur for some people each year. Some people have twelve or more a year. A hospital stay is necessary for a serious pain crisis. With sickle cell anemia, some teenagers and adults may experience chronic pain, which can be brought on by ulcers, bone and joint degeneration, and other conditions.

Hands and foot swelling: Sickle-shaped red blood cells obstructing blood flow to the hands and feet are to blame for the edema.

Recurring infections: The spleen may become damaged by sickle cells, making it more susceptible to infections. Antibiotics and immunizations are frequently given to infants and kids with sickle cell anemia to help them avoid potentially fatal illnesses like pneumonia.

The gene that instructs the body to produce hemoglobin, an iron-rich substance found in red blood cells, is altered in sickle cell anemia. Red blood cells that have sickle cell anemia are hard, sticky, and malformed due to the hemoglobin that is associated with the condition. Both the mother and the father must have one copy of the sickle cell gene, commonly known as the sickle cell trait, and must pass both of the child's copies of the changed version. A child will inherit the sickle cell trait if only one parent has the sickle cell gene.

People with the sickle cell trait can produce both normal and sickle cell hemoglobin because they have two normal hemoglobin genes and one gene with an altered version. Both parents must contain the sickle cell gene for a child to be born with sickle cell anemia. People with sickle cell anemia are most frequently of African, Mediterranean, and Middle Eastern heritage in the United States.

Sickle cells can block blood flow to a portion of the brain, which can result in a number of complications associated with sickle cell anemia. Seizures, numbness or weakness in the arms and legs, sudden speech problems, and loss of consciousness are all indications of a stroke. Take people child to the doctor right away if they exhibit any of these symptoms. Strokes are often fatal.

Correspondence to: Opoka Batte, Department of Haematology, Homerton University, London, UK, Email: opokabatte@gmail.com

Received: 02-Jun-2022, Manuscript No. JBDT-22-17471; **Editor assigned:** 06-Jun-2022, Pre QC No. JBDT-22-17471 (PQ); **Reviewed:** 20-Jun-2022, QC No. JBDT-22-17471; **Revised:** 30-Jun-2022, Manuscript No. JBDT-22-17471 (R); **Published:** 07-Jul-2022, DOI: 10.4172/2155-9864.22.13.507.

Citation: Batte O (2022) The Significance of Sickle Cell Disease and its Comorbidities. J Blood Disord Transfus.13:507.

This potentially fatal consequence, which manifests as chest pain, fever, and breathing difficulties, can be brought on by a lung infection or sickle cells clogging blood channels in the lungs. It might call for immediate medical attention.

High pulmonary blood pressure can develop in people with sickle cell anemia. Adults are generally affected by this condition. This illness, which can be fatal, frequently causes shortness of breath and exhaustion. Organs impacted by sickle cells that prevent blood flow are deprived of both blood and oxygen. Blood oxygen levels are also abnormally low in sickle cell anemia. This deficiency in oxygen-rich blood can be lethal and harm nerves and organs like the kidneys, liver, and spleen.