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Sickle cell anemia

What is Sickle-cell Anemia?

It is a genetic disorder in the red blood cells in which the cells are in the shape of a sickle.this is an indication that the cells are not healthy and unable to carry oxygen to the whole body. Red blood cells live for about 120 days, while sickle cells live much shorter.

Sickle cell disease is hereditary and not contagious.

What are the causes of sickle cell anemia?

Sickle cell anemia is often caused by a genetic defect, where the abnormal hemoglobin causes the hardening, stickiness and distortion of red blood cells.

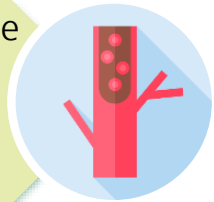
What are the acute complications of sickle cell anemia?

Swelling of some parts of the body such as: (hands and feet).

Severe pain attacks of in different parts of the body (bones, chest, etc.) .

jaundice (yellow eyes)

Aplastic Anemia(The inability of the bone marrow to produce enough cells to regenerate blood cells.



What are the acute complications of sickle cell anemia?

Fever above 38 Celsius as an indication of bacterial infections.

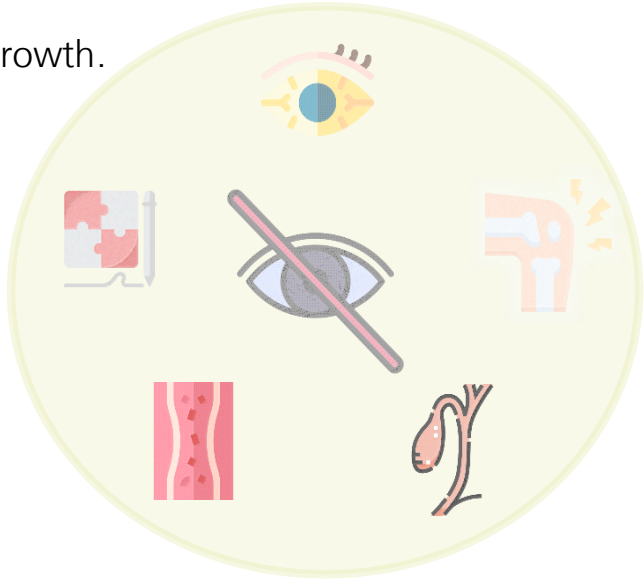
stroke.

Persistent painful erection of the penis in males.

Sudden enlargement of the spleen due to the accumulation of of blood in the spleen.

What are the chronic complications of sickle cell anemia?

1. Strokes.
2. Frequent infections by bacteria.
3. Jaundice (yellowing of the skin and eyes).
4. Problems and deficiencies in the spleen.
5. Stones in the gallbladder.
6. Problems with growth.



What are the chronic complications of sickle cell anemia?

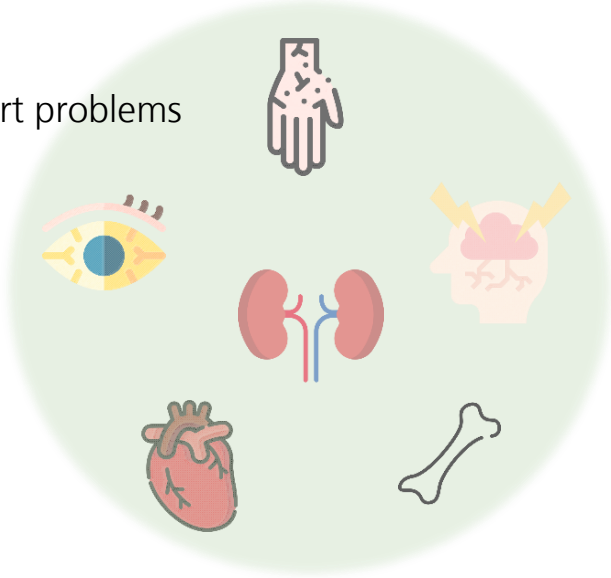
8- Ulcers in the skin.

9- Hearing loss, retinopathy.

10- Chronic diseases and problems in some organs such as the liver, lung and kidney.

11-Ischemic osteonecrosis (s a disease resulting in the death of bone cells) and osteoporosis (a health condition that weakens bones).

12 - heart inflation, heart problems and high pressure.



How is sickle cell anemia diagnosed?

The disease is diagnosed by the doctor after studying the medical history, symptoms of adults and children and blood test to check the hemoglobin (a protein carried inside red blood cells).

What are the risk factors?

1. Both the father and mother are infected.
2. Both father and mother are carriers of the disease.
3. One parent is a carrier of the disease and the other is infected.

Note: In the case of other hereditary blood diseases, particularly Mediterranean anemia (B), the risk factor still exists.

What is the difference between a healthy person and infected person and a carrier of the disease?

1. Healthy: He is the person who does not carry the disease and does not pose any danger to his children from being infected when he gets married.

2. A carrier of the disease: is a person who carries the characteristic of the disease and does not show symptoms. This person can marry a healthy person and have healthy children, but it is dangerous for him to marry an infected person or a carrier of the disease like him, as his children are susceptible to this disease.

3. The person infected with it: is the person who shows symptoms of the disease and this person can marry a healthy person and have healthy children, and it is dangerous for him to marry a carrier of the disease or an infected person like him, as his children are vulnerable to get this disease.

What is the risk percentage of sickle cell anemia?

Healthy Father Heathy Mother

Healthy child 100%

Carrier Mother infected Father

infected child 50%

carrier child 50%

Infected Mother infected Father

Infected child 100%

Infected Mother healthy Father

Carrier child 100%

Carrier mother carrier Father

carrier child 50%

infected child 25%

healthy child 25%

Carrier Mother healthy Father

carrier child 50%

healthy child 50%

What is the pain attack of sickle cell anemia?

It is the occurrence of severe pain in any of the following organs: (bones, joints, abdomen, chest) and may be accompanied by (shortness of breath, high temperature).

When a pain attack occurs, parents must:

1. Give the patient plenty of fluids.

2. Give the patient home pain relievers.

3. Let patient rest and give painkillers as instructed by the doctor.

4. visit Emergency in case of inability to deal with the pain.

Is there a treatment for sickle cell anemia?

Stem cell transplantation is considered a curative treatment, but it involves a lot of risks and is resorted to in special cases according to the doctor's recommendations. But there are some methods and medicines prescribed by the doctor that can alleviate and reduce the problems associated with this disease, including:

1. Comprehensive care: which can be achieved through regular follow-up with a pediatric hematologist or pediatrician with expertise in blood diseases in order to detect and prevent complications.

2. Psychosocial support:as it is important for anyone with a chronic illness.

Is there a treatment for sickle cell anemia?

3. Routine outpatient visits, including:

- Educating the family and assessing the child by the doctor in case of fever, about dealing with a pain attack at home, using a pain reliever, as well as using some measures such as heat pads and relaxation technique and when to visit the emergency.

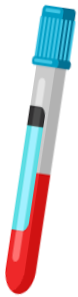
- Hydroxyurea is used from the age of 9 months and is recommended for all patients in order to prevent complications associated with sickle cell patients, with a focus on patients who suffer from the following complications: (recurrent episodes of pain, acute chest pain, spleen problems, stroke).

Is there a treatment for sickle cell anemia?

- Take folic acid supplements orally once a day after consulting a doctor.
- Ensure to take the Antibiotics and Vaccinations: All children with sickle cell anemia should receive oral antibiotics (penicillin). For children who are allergic to penicillin, another type of antibiotic (erythromycin) can be given.
- Ensure that the child has taken all vaccinations at their specified times.

How can sickle cell anemia be prevented?

1. A medical examination before marriage may help reduce the transmission of sickle cell anemia between generations.
2. If you are a carrier of the disease, you should see a genetic counselor before deciding to have children.

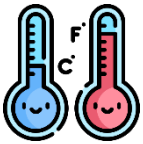


What should I do if I have sickle cell anemia?

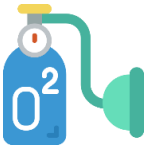
1. Follow a healthy diet "under the supervision of a doctor" and increase fluid intake such as water, juice and milk.

2. Avoid high places.

3. Do not be exposed to very cold or very hot weather.



4. Be sure to take enough oxygen when visiting mountainous areas or when doing any physical effort.



5. Adherence to doctor instructions and attending medical appointments.

Sources and references:

Saudi Ministry of Health

Review and audit:

The content of this booklet has been reviewed by hematology consultants s at King Fahd University Hospital.

Health Awareness Department

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