Minnesota Newborn Screening Program

Blood Spot Screen Result Notification

Hemoglobin S and C, no A (hemoglobin SC disease)

What was found on the newborn screen?

The newborn screen that was collected at birth found that your baby had hemoglobin S (S stands for sickle) and hemoglobin C and was missing normal hemoglobin (hemoglobin A).

What does this mean?

When only hemoglobin S and C are found, it is likely that your baby has a mild version of sickle cell disease, called hemoglobin SC disease.

What happens next?

Your baby's doctor or a specialist (pediatric hematologist) familiar with hemoglobin SC disease will help arrange for more testing.

What is hemoglobin SC disease?

Hemoglobin SC disease is a disorder which affects the hemoglobin/blood. Hemoglobin is a protein in the red blood cells. The job of hemoglobin is to carry oxygen throughout the body.

Red blood cells containing normal hemoglobin (hemoglobin A) are round and flexible. People with hemoglobin S and hemoglobin C have red blood cells that contain no normal hemoglobin. Their red blood cells become sickle (banana) shaped instead of round (donut) shaped.

Sickle-shaped red blood cells can be rigid and can get trapped in blood vessels and block blood flow. Tissues and organs that do not get normal blood flow can become damaged. This can be painful and cause health problems.

What health problems can it cause?

Hemoglobin SC disease is different for each child. This disease is a lifelong condition that may result in serious health problems. If untreated, it can cause:

- Drop in red blood cell count (anemia)
- Enlarged spleen
- Infections
- Painful crises
- Serious lung disease

Children with hemoglobin SC disease can benefit from prompt and careful treatment.

What treatment options are available?

Hemoglobin SC disease can be treated. Possible treatments throughout childhood can include:

- Blood transfusions
- Hydroxyurea medication (a medicine which helps the body produce normal red blood cells)
- Immunizations
- Medications for pain
- Children with hemoglobin SC

Children with hemoglobin SC disease should see their regular doctor and a doctor who specializes in blood disorders.

Resources

Genetics Home Reference: http://ghr.nlm.nih.gov

Save Babies Through Screening Foundation: www.savebabies.org

Baby's First Test: www.babysfirsttest.org



