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ORIGINAL ARTICLES

Sickle cell Anemia Disease

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ABSTRACT

Sickle cell anemia (uh-NEE-me-uh) is the most common form of sickle cell disease (SCD). SCD is a serious disorder in which the body makes sickle-shaped red blood cells. “Sickle-shaped” means that the red blood cells are shaped like a crescent Normal red blood cells are disc-shaped and look like doughnuts without holes in the center. They move easily through your blood vessels. Red blood cells contain an iron-rich protein called hemoglobin (HEE-muh-glow-bin). This protein carries oxygen from the lungs to the rest of the body. Sickle cells contain abnormal hemoglobin called sickle hemoglobin or hemoglobin S. Sickle hemoglobin causes the cells to develop a sickle, or crescent, shape. Sickle cell anemia is a genetic tail illness and is a blood disorder that had known with defective Hemoglobin is molt anop flour and allow to easy passing from blood arterioles.

Key words: Anemia, blood, Hemoglobin, Sickle cell anemia, genetic

introduction

Sickle cell anemia is a genetic tail illness and is a blood disorder that had known with defective Hemoglobin is molt anop flour and allow to easy passing from blood arterioles. Hemoglobin's cell is firm sickle cell and is in sickle shape. These Hemoglobin molecules tend to cluster shape and accord in each other. Side so; they can't pass from blood arterioles easily.

These cluster lead to stopping the blood flowing that deportee oxygen. On contrary that cells with natural hemoglobin live most of 120 days. Sickle cell dies after 10-20 day. This process lead to indication of anemia in a chronic circuit. Sickle cell anemia outcome from a gene’s jumping that because of them a nucleotide with organic Timin, exchange its seat with another nucleotide- organic Adenine.

Most Wide- Spread of Any Kind of Sickle Cell Gen:

Sickle Cell's Attribute:

These persons carrier a defective gen- Hbs but they have some natural hemoglobin- Hb a , too. These persons with sickle cell usually are without sign. The cickle cycle happened in full- tensions tiredness, decrease of oxygen or putrefaction condition and outbreak as a result of sickle cell illness phenomenon.

Sickle Cell Illness-Hemoglobin C:

Person has two kinds of Hemoglobin Hbs and Hbc. C Hemoglobin can cause to create aim cells. The existence of natural Hemoglobin hear this hemoglobin cause to that the person hasn't sign of anemia. If sickle C hemoglobin coincide with aim cell lead to slight or middle anemia. These persons often suffer this sickle cell illness with slight degree. The crisis of vessels obstruction, organ's damages, for cause of anemia and repeated sickleing and high possibility of putrefaction are common adjectives for Hbss and Hbsc.

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Sickle Cell Illness – E Hemoglobin:

This kind is alike sickle cell C illness. With this different that a element in hemoglobin molecule had supersede. This kind usually seeing in individuals in south of Asia. Some people with illness of hemoglobin E are without sign. But on special condition like as fatigue, decrease of oxygen or shortage a iron, outbreak slight to middle anemia.

Hemoglobin S – Beta Talasemy:

This illness create coincide heir of talasemy's gens and sickle cells. This derangement cause to middle anemia and similar conditions but very slighter, than sickle cell illness. All shape of sickle cell illness can outbreak events along will illness. The person that suffering to Hbss suffer extremely. Firstly sickle cell suffer individuals in south of Africa and xaraeeb but the sickle cell adjective can find in India, Latin America, middle east and the Mediterranean race. On the basis of estimate, most of 72 thousand people in united state suffer from this illness. Millions of person in all over the world suffer from events of sickle cell illness. 2 million of American and African people or 12.1 population of America have the sickle cell avality.

Causes of Sickle Cell Illness:

The sickle illness is a hereditary illness that create by genetically jump. This genetical jump. These genes are on the structure of cells to chromosome. Pair of chromosome 11 includes responsible gens that produce normal hemoglobin. One jump in these gens lead to sickle cell illness. This jump seeing in areas of world that have malaria very much. But the persons that have sickle quality won't suffer to malaria. The sickle quality keeps person contrast with malaria's parasite, truly. We can see malaria often in Africa and Mediterranean’s area and Uruapan. A child that heredity genetical's jump from two pair of his parent, will suffer from sickle cell illness. A child that heredities jump from one of his parent will carrier of sickle cell illness and can transfer it for his children.

The Sign of Sickle Cell Illness:

Signs and events coincide with sickle cell illness, also every person experience different signs.

Anemia:

Is the most wide-spread sign of sickle cell illness. In this illness, red cells of blood produce as shape of sickle cell. But because of deformation, they haven't ability to carry the oxygen. As a result of that they lose the body's water and suffer from fever. Sickle shape cause to cells hardness and spring of them in vessels. Conscuently, cells in spleen will ruin or dead for cause of unnatural operation and decrease in red blood cells feed to anemia. Sever anemia, will tired and pale them person, also the ability of carrying oxygen to tissues accost with problem.

The Crisis of Pain or Sickle:

When blood vessels closed by sickle cell and cutting the flowing blood and happen pain crisis that namely vessels closing crisis pain create in all over the body but it can sense often in breast cupboard, arms and legs. Painful inflation of legs and hand that their name is ductility and we can see that in babies and child sub 3 years old. Priapism, is a painful process in sexual tool of men may happen. Every kind of derangement in blood flowing lead to pain, inflation, and tissue's death are in cause of unreception of enough blood oxygen.

Torrid Chest Syndrome:

One of the most dangerous events of sickle cell illness is sickle process in chest. Usually it happens suddenly and in fension condition, putrefaction, fever, and swallowing of body. Sickle cell connects together and then they close vessels of bellows. Their sign like as pneumonia and are fever, pain, and sever singular cough. Several episodes of chest syndrome lead to permanent chest damage. Aggregation of blood cells in spleen: this process lead to sudden decrease in hemoglobin and if it doesn’t treaf, urgent it threat life. Because of increasing in spleen blood volume, this member, will big and painful. After frequently episodes, serious damage will come to spleen. Many of children than suffer from this illness they haven't spleen that worked

good in 8 years old, because their spleen exit from them by surgery or lose it's operation in effect of frequent episodes. The possibility of putter faction is the biggest anxiety is about narrated children. Putrefaction is the wide spread cause of death in children sub-5 year in this group.

Heart Attack:

Is another intensive and spontaneity of sickle cell illness. Deformation sells by big blood vessels closing feeding brain lead to heart attack. Any kind of derangement in blood flowing and oxygen to brain lead to nervous conreferibility derangements.

In 60% of patients that have one heart attack, there is possibility of second or third heart attack, too.

Jaundice or Sking, Eyes and Mouth Yellow:

Is one of the most wide-spread signs and marks of sickle cell illness, sickle cells haven't duration lifetime as like red cell's of blood and they ruined quickly before liver purification them from blood. Billy robin (yellowing agent) that create from these cells lead to jaundice and yellowish.

All of important organ react with this illness. Liver, heart kidneys, gallbladder, eyes, bones, and joints will damage because of unnatural operation of sickle cells and doesn’t essence of blood flow in resells. Problems include:

- Increase in putter faction
- Leg wounds
- Bon damage
- Stones of biliary
- Damages in kidney and decrease of urine
- Eye’s damage

The sign of sickle cell illness may like as another derangement of blood and medical problem. Always council with a doctor for quick and precise recognition.

How can we recognize sickle cell illness?

Moreover full doctor's memoir and physical examination recognition method of sickle cell illness include. Blood testing and another evaluation method. Now, bolstering blood test of infant doing for start quick treatment.

First recognition: Hemoglobin electrophorus is a blood test that help us in recognition of individual that carrier sickle cell quality or every illness that coincide with this illness sickle cell. Volume of genetically illnesses in Iran is like as other countries. Existence facilities for recognition and identification of genetically illness is like as this way that Behzisti organization create centers of genetic consultation for genetic patients on last decades in different provinces and hygienic centers pay that in all over the country, too. Moreover, there is some private center in Iran; too that doing genetically consultation and genetic tests that in Tehran and center of province, they are nearly more. There is a finding patient structure for genetic illness in country and doing genetic tests.

Increase of Familial Marriage and the Tragedy of Genetic Illness:

Most of children that born with genetic suffering, live with problem and they dead very soon. Because most of these children have very weak defensive systems and because of intellectual and bodical mustiness afoul to repeated tensions. About treatment this and of illness, originally, this illness hasn't special treatment. Doctors only for prevent of illness progress, they treat patient photo treatment (lighting treat), because the present of yellow in most these patients are very high and yellowing outbreak bulks that is in brain and it coincide with progressed way to low with strengthening signs such as immobility, low food and decrease in level of consciousness and liver, don’t transpiration necessary enzymes for contrast with this illness and actually, majority of patients, suffer from putter faction in another parts of their body. The only way for prevention of this illness, is abstinence from familial marriage and doing genetically test in circulation of pregnancy. The genetic illnesses nowadays are advancing and progressing, unfortunately and this problem change to a crisis in society. These kind of marriage after eruptive growth of population, are second agent for our country's problem. This subject cause to that our countries’ responsible doing serious decision about this important problem such as, triggering conciliation clinics before marriage for prevent of these defective and

controlling the irregular growth of population. And it seems that, the existence of scientific source for awarding a society especially hygienic- remedial is a necessary work. Studies and researches proving us that familial marriage converse industrial life, are vulnerable and their risk for create patient's children are more than unfamiliar marriage. Proficient's studies and people's acquaintance from risks of familial marriage, show that, volume of these marriages are decrease in the world and even are forbidden in some countries.

Genetically Treatment:

Genetically treatment include in fare a gene inter a cell for attain a kind of treatment's effect with transfer the copies of gene operation eligible related to patient that, it possible the (features) of jumping reversible phenotype.

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