Pediatric Oncology: Open Access
vol. 7 (2022), Article ID 1000001, 2 pages
doi:10.11131/PO-22/1000001

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http://www.agialpress.com/

Commentary

Fundamentals of Recognizing and Treating Iron Deficiency Anemia

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Editor
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Dates
Received: 01-Sep-2022, Manuscript No. PO-22-80439; Editor assigned: 05-Sep-2022, PreQC No. PO-22-80439 (PQ); Reviewed: 19-Sep-2022, QC No. PO-22-80439; Revised: 26-Sep-2022, Manuscript No. PO-22-80439 (R); Published: 03-Oct-2022, DOI: 10.11131/PO-22/1000001

1. Description

Low levels of red blood cells are referred to as anemia. Anemia is diagnosed through a standard blood test by a low hematocrit or hemoglobin level. The red blood cells' primary protein is hemoglobin. It transports oxygen and distributes it all over the body. The hemoglobin level will be low if we have anemia. The tissues or organs might not get adequate oxygen if it is low enough. Fatigue and breathlessness are anemia symptoms that result from the organs not receiving the nutrients they require to function properly.

Some types of anemia are inherited genetically, and infants may be born with it.

Because of blood loss from periods and increased blood supply requirements during pregnancy, women are more susceptible to iron deficiency anemia. Older persons are more likely to have renal disease or other chronic medical disorders, which increases their chance of developing anemia.

We might not even be aware that we have anemia because the symptoms can be so subtle. As the blood cells start to go, symptoms frequently start to appear. The following symptoms may be present, depending on the etiology of the anemia:

• Feeling faint, lightheaded, or as though we might pass out

• Rapid or unusual heartbeat; headache; pain, including in the joints, bones, and muscles

The body may be unable to produce enough red blood cells due to issues with the bone marrow and stem cells. Red blood cells can be created from some of the stem cells in the marrow that fills the middle of the bones. We could get anemia if the stem cells are insufficient, malfunction, or are replaced by other cells like cancer cells.

• Aplastic anemia develops when there are insufficient or no stems cells. Aplastic anemia may be inherited or the result of pharmaceutical side effects, radiation, chemotherapy, or an infection that damaged the bone marrow. The bone marrow is also frequently affected by leukemia or multiple myeloma, among other cancers. Aplastic anemia can also have unclear causes, such as lead exposure. The bone marrow is toxic to lead, which reduces the number of red blood cells in the body. Adults who labor with lead may become poisoned, or children who consume lead paint chips may become poisoned. It can also spread if some varieties of ceramics that aren't properly glazed come into contact with the meals.

• Hemoglobin production is faulty in thalassemia, resulting in the creation of four chains incorrectly. We produce extremely little red blood cells, yet we can also produce enough to be asymptomatic or have serious symptoms. It typically affects people of Mediterranean, African, Middle Eastern, and Southeast Asian origin and is inherited through the genes. The most severe type of this illness, known as Cooley's anemia, can range in severity from mild to life-threatening.

Hemolytic anemia is the result of fragile red blood cells that can't withstand the pressure of moving through the body and may burst. This disorder could be present from birth or develop later. It's not always clear what causes hemolytic anemia.

The red blood cells, hemoglobin, and other components of the blood will be measured during a Complete Blood Count (CBC) test. After the CBC, the doctor will inquire about the family history and medical background. To count the white blood cells, examine the morphology of the red blood cells, and search for odd cells, use a blood smear or differential. To check for immature red blood cells, perform a reticulocyte count.

The anemia type will determine how we are treated. There are numerous reasons, which mean there are numerous viable therapies. We may require medication, blood transfusions (in which we receive blood from another person), or a bone marrow transplant (in which we receive stem cells from a donor) if we have aplastic anemia. It's possible that we will need medicine to suppress the immune system if we have hemolytic anemia. We can receive a recommendation from the primary care physician for a vascular issues specialist.