



An Overview of Anemia Consequences and its Diagnosis

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DESCRIPTION

Anaemia is a disorder where the body lacks sufficient numbers of healthy red blood cells. Oxygen is delivered to human tissues *via* red blood cells. In the body, red blood cells typically remain there for 120 days. Red blood cells in the blood degrade earlier than usual when hemolytic anaemia is present. The crucial job of red blood cells is to transport oxygen from our lungs to our heart and throughout the rest of our body. These red blood cells are created in our bone marrow. Hemolytic anaemia develops when the rate of red blood cell oxidation exceeds the rate at which these cells are produced by our bone marrow.

- a) Extrinsic or intrinsic hemolytic anaemia are both possible.
- b) An external hemolytic.

Extrinsic hemolytic anaemia

Extrinsic hemolytic anaemia can develop in a number of ways, such as when an immunological reaction takes place or when the spleen captures and kills healthy red blood cells. It may also result from the breakdown of red blood cells brought on by infections or malignancies.

Intrinsic hemolytic anemia

When the red blood cells in our body produces don't work properly, intrinsic hemolytic anaemia might occur. In patients with sickle cell anaemia or thalassemia, who have defective haemoglobin, this disorder is frequently hereditary. In other cases, this illness can be caused by an inherited metabolic imbalance, such as in people with G6PD deficiency or red blood cell membrane instability, such as hereditary spherocytosis. Hemolytic anaemia can strike anyone at any age.

Causes

A physician can be unable to identify the cause of hemolytic anaemia. However, a number of illnesses and even some drugs can contribute to this condition. The sort of hemolytic anaemia brought on by obtaining red blood cells of the incorrect blood

type is one of the most serious types. Every individual has a unique blood type (A, B, AB, or O). Specialized immune proteins known as antibodies will assault the foreign red blood cells if we get blood that is not compatible. Red blood cells are destroyed exceedingly quickly as a result, which can be fatal. This is why before donating blood, medical professionals must thoroughly verify blood types. Hemolytic anaemia can have transient causes. If a doctor can find the underlying cause of hemolytic anaemia and treat it, the condition may be cured.

When a mother and child have different blood types, usually as a result of Rh incompatibility, it can result in hemolytic illness of the newborn. Erythroblastosis fetalis is a different term for this disorder. A person's precise blood type also depends on the ABO blood types (A, B, AB, and O) as well as their Rh factor status, which can be either positive or negative. Examples are the letters O positive, AB negative, A positive, and A negative. A infant with hemolytic illness may develop if the mother's red blood cells test positive for the Rh factor and the father's do not if the mother has a negative Rh blood type and the father has a positive one.

The results are exactly the same as red blood cell transfusion reactions caused by an ABO mismatch. The mother's body may attack the newborn if it perceives the baby's blood type as "foreign." A woman is more prone to have this problem during her second pregnancy and later. This is as a result of how the body develops immunity. A mother's immune system learns how to create defences against the red blood cells it perceives as foreign during her first pregnancy. Doctors refer to phenomenon as sensitization to various types of red blood cells. Newborn hemolytic illness is problematic because the infant may experience considerable anaemia, which results in additional problems. There are remedies for this issue. Red blood cell transfusions and the drug intravenous immunoglobulin are among them.

Detection of hemolytic anaemia

A study of our health history and symptoms is frequently the first step in diagnosing hemolytic anaemia. Our doctor will

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Received: 04-Oct-2022, Manuscript No. JBBDT-22-18593; **Editor assigned:** 06-Oct-2022, Pre QC No. JBBDT-22-18593 (PQ); **Reviewed:** 21-Oct-2022, QC No. JBBDT-22-18593; **Revised:** 31-Oct-2022, Manuscript No. JBBDT-22-18593 (R); **Published:** 8-Nov-2022, DOI: 10.4172/2155-9864.22.13.527

Citation: Lan M (2022) An Overview of Anemia Consequences and its Diagnosis. J Blood Disord Transfus. 13:527.

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examine physically and look for pale or yellowed skin. In order to feel for any soreness that would point to an enlarged liver or spleen, they may also gently press on various parts of our belly. The amount of haemoglobin in our red blood cells that our liver has degraded and digested is measured by this test.

Count of reticulocytes examination evaluates the quantity of developing red blood cells, which eventually turn into adult red

blood cells, that our body is generating. A urine test to check for the presence of red blood cell disintegration is one of the additional tests. A bone marrow aspiration or biopsy may be required in specific circumstances. The quantity and shape of red blood cells produced can both be determined by this test.