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Commentary

Hematological Disorder of Iron Deficiency Anemia

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DESCRIPTION

Hematology is the study of blood and blood disorders. It treats diseases that affect the production of blood and blood cells, hemoglobin, blood proteins, bone marrow, platelets, blood vessels, spleen and clotting system. Such diseases may include hemophilia, blood clots (thrombus), other bleeding disorders and leukemia, multiple myeloma and lymphoma. Anemia is defined as hemoglobin under two standard differences between the average of the patient's age and gender. Iron is an important component of the hemoglobin molecule. The most common cause of anemia worldwide is iron deficiency, which results in the formation of microcytic and hypochromic red cells on the peripheral smear. Many causes of iron deficiency vary based on age, gender and socioeconomic status. The patient often has specific complaints such as fatigue and dyspnea at work. Treatment is iron supplementation to reverse the underlying condition. Iron supplementation is most often by mouth, although in some cases intravenous iron may be needed. A large number of patients with iron deficiency anemia have been found to stay in the hospital longer with adverse events. Iron deficiency anemia in blood disorders is the most common cause of anemia worldwide, resulting in the formation of microcytic and hypochromic red cells on the peripheral smear. The patient often has specific complaints such as fatigue and dyspnea at work. A large number of patients with iron deficiency anemia have been found to stay in the hospital longer with adverse events [1,2].

The cause of iron-deficiency anemia varies based on age, gender and socioeconomic status. Iron deficiency can be caused by insufficient iron intake, decreased absorption or loss of blood. Iron-deficiency anemia is most often caused by blood loss, especially in elderly patients. This can also be seen with reduced diet, increased systemic requirements for iron during pregnancy and decreased iron absorption such as celiac disease. In newborns, breastfeeding protects against iron deficiency due to the high bioavailability of iron in breast milk compared to cow's milk; Iron deficiency anemia is the most common form of anemia in young children with cow's milk. In developing countries, parasite infestation is also an important cause of iron-deficiency anemia. Dietary sources of iron include green vegetables, red meat and iron-fortified milk formulas [3,4].

Iron is required for the production of hemoglobin. Iron reserves can be depleted due to blood loss, decreased intake, impaired absorption or increased demand. Iron-deficiency anemia arises from occult gastrointestinal bleeding. Adults over 50 years of age with iron-deficiency anemia and gastrointestinal bleeding should be evaluated for malignancy. However, the gastrointestinal analysis evaluation failed to establish the cause in one-third of the estimated patients. Iron deficiency can lead to microcytic hypochromic anemia in peripheral blood smears. Because iron is the most common mono-nutrient deficiency, the American Academy of Pediatrics recommends supplementation. When to start a supplement and the required dose depends on the age and diet of the child. The complications of iron deficiency anemia include: Increased risk of infections, Heart conditions, Developmental delay in children, Pregnancy complications, depression.

CONCLUSION

Many studies on iron replacement therapies were conducted many decades ago. Most of these studies were not done randomly and subsequent appointments were few. Reports of treatment of iron deficiency anemia are based on the opinion of all experts, but there is a clear benefit of short-term treatment. There are significant gaps in how long the treatment should last, as well as those at risk of developing racial differences and adverse reactions in response to iron.

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