SHORT COMMUNICATION

Anemia disease: Quick overview

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ABSTRACT

Anemia is a prevalent problem among community-dwelling seniors, with prevalence estimates ranging from 9%-18% in males and 8%-13% in women. Anemia affects more than 20% of those aged 85 and more, a rapidly expanding segment of the world's population. Importantly, only about 1% of community-dwelling older persons have haemoglobin levels below 10 g/dL, indicating that the bulk of anaemia cases are moderate. Anemia is more severe in institutionalised settings, such as nursing homes, where the frequency of anaemia in older people ranges from 48%-63%. Anemia, also known as anaemia or erythrocytopenia, is a disorder in which the quantity of Red Blood Cells (RBCs) or haemoglobin in the blood is lower than normal. Nonetheless, during the last decade, multiple studies have demonstrated that anaemia is an independent predictor of a range of negative outcomes in both community-dwelling and institutionalised older persons. Bleeding, decreased red blood cell formation, and increased red blood cell breakdown can all contribute to anaemia. Trauma and gastrointestinal bleeding are two common causes of bleeding. Iron insufficiency, vitamin B12 deficiency, thalassemia, and a variety of bone marrow neoplasms are also causes of reduced production. Genetic abnormalities like sickle cell anaemia, infections like malaria, and some autoimmune diseases can contribute to accelerated breakdown.

Key Words: *Anemia; Red blood cell; Gastrointestinal bleeding*

INTRODUCTION

The risk of death in older anaemic persons is much higher than in older non-anemic adults. This link has been found in several large cohort studies and remains significant even after excluding older adults with comorbid conditions. Low-normal haemoglobin concentrations have also been linked to an increased risk of death, though the evidence is inconsistent across studies and depends on the definition of low-normal, the comparison group, race/ethnicity, and comorbidity. Many people with reduced limb loading, such as spinal cord damaged patients, astronauts, elderly people with limited movement, bed-bound and experimental bed-rest participants, are among them. Anemia is the most common blood condition, affecting one-third of the world's population. Nearly 1 billion people suffer from iron deficiency anaemia. Anemia caused by iron deficiency caused around 183,000 fatalities in 2013, down from 213,000 deaths in 1990. This illness affects more women than men, particularly during pregnancy, as well as youngsters and the elderly. Anemia raises the cost of medical treatment and reduces a person's productivity by limiting their ability to work. The global frequency and consequences of anaemia have been reported in several prior studies. According to the World Health Organization (WHO), roughly 30% of the world's population was anaemic in 1985. In 1992, the World Health Organization estimated that 37% of all women were anaemic. Riva and colleagues published a study in this issue of the journal that looked at the risk of hospitalisation and death among Italian persons aged 65 to 84 who lived in Biella, Piedmont. The effects of moderate anaemia, defined as a haemoglobin content of 10.0 g/dL to 11.9 g/dL in women and 10.0 g/dL to 12.9 g/dL in men, were of special interest to these researchers. Less than 1% (31/4,501) of the study participants had a haemoglobin concentration below 10 g/dL, which is consistent with other population-based studies. After correcting for potential confounding factors, older persons with moderate anaemia had a 32% greater risk of hospitalisation and a nearly two-fold increased mortality risk compared to those who were not anaemic over the 3-3.5 years follow-up period [1].

Anemia symptoms

Anemia is the most prevalent blood disorder; depending on the underlying reason, a person with anaemia may not have any symptoms at all, and no symptoms may be observed at all since the anaemia is mild at first, and then the symptoms grow as the anaemia worsens. Anemia can make a person feel weary, weak, have trouble concentrating, and have shortness of breath when they exercise. Low iron levels in the body are the most common cause of anaemia. Iron-deficiency anaemia is the name for this form of anaemia. Hemoglobin, the molecule that transports oxygen throughout your body, requires a particular amount of iron. Found that anaemia was linked to a higher likelihood of self-reported mobility constraints among community-dwelling women aged 70-80 years (difficulty with walking one-quarter of a mile or climbing 10 stairs). Similarly, a prospective study found that anaemia was linked to lower performance in objectively evaluated balance, capacity to stand from a chair, and walking speed in community-dwelling seniors aged 71 and up during a 4-years period. Furthermore, anaemic community-dwelling older persons had considerably lower muscle strength, muscle mass, and density evaluated by quantitative computed tomography than non-anemic community-dwelling older adults. However, the mechanisms underlying these relationships have yet to be discovered [2].

Anemia therapy

To ease pain and avoid complications, treatment may include oxygen, pain medications, and oral and intravenous fluids. Blood transfusions, folic acid supplements, and antibiotics may also be recommended by doctors. Iron deficiency is widespread in impoverished countries. In most poor countries, an estimated two-thirds of children and women of reproductive age have iron insufficiency without anaemia, while one-third have iron deficiency with anaemia. Iron insufficiency caused by insufficient dietary iron consumption is uncommon in males and postmenopausal women. When iron deficiency is diagnosed, it necessitates a search for probable sources of blood loss, such as gastrointestinal bleeding from ulcers or colon cancer. Although based on data, this report presents modeling-based estimates of anaemia determinants and does not replace the need for field epidemiology to measure the contributions to anaemia of factors such as iron, folate, vitamin B12, and vitamin A deficiencies; hemoglobinopathy; malaria; inflammation; and other causes in specific settings; such studies are uncommon outside (and even within) developed nations [3].

Agents that stimulate erythropoiesis

Erythropoiesis-Stimulating Agent (ESA) is drugs that increase the production of red blood cells in the bone marrow. They are used to treat anaemia caused by end-stage renal disease, chemotherapy, severe surgery, or some HIV/AIDS medicines. They reduce the requirement for blood transfusions in certain cases. The various agents are roughly comparable. They are administered by injection. Joint discomfort, rash, vomiting, and headache are common adverse effects. Heart attacks, strokes, accelerated cancer development, and pure red cell aplasia are all serious adverse effects. It is unknown whether usage is safe during pregnancy. They function in the same way as naturally occurring erythropoietin does. They were licenced for medicinal use in the United States for the first time in 1989. It is on the WHO's List of Essential Medicines.

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CONCLUSION

In geriatric medicine, anemia is very common. Many long-term studies have shown that anaemia is connected with poor health and functional results in the elderly. It is uncertain if treating anaemia with erythropoiesis-stimulating drugs or other therapies reduces the likelihood of poor health consequences. It is recommended that the cause of anaemia be established first. There is moderate medical evidence to support a combination of iron supplements and erythropoietin therapy to assist minimise the need for red blood cell transfusions following surgery in patients with pre-operative anaemia. More study is needed to clarify the processes through which anaemia contributes to functional decline in older persons, which will aid in the design and implementation of intervention studies. Furthermore, the significance of anaemia as a comorbid illness deserves consideration since it may exacerbate the functional implications of diabetes, hypertension, renal disease, and other age-related disorders. As a result, observational studies as well as randomised trials are required to better our understanding of anaemia in the elderly population [4].

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