

In Hematology

ANEMIA AT OLDER AGE (Blood-2018; 131(5):505-14)

Anemia is frequently diagnosed in older individuals. Anemia in older individuals is a key indicator of various reactive and clonal conditions. Prevalence of anemia > 65 years is approximately 17%.

CAUSES:

1. Chronic inflammatory diseases like rheumatoid arthritis, chronic hepatitis etc.,
2. Non-hematopoietic neoplasms-GI tumours, metastasis etc.,
3. Endocrinologic and metabolic causes like decreased EPO (renal), thyroid dysfunction, insulin deficiency.
4. Blood loss-GI bleeding, bleeding from other sites.
5. Increased consumption or destruction of erythrocytes-AIHA, heart valve mediated red cell lysis, hypersplenism etc.,
6. Lack of nutrients- iron deficiency; copper deficiency; vitamin B12 or folate deficiency.
7. Drug induced anemia.

MECHANISM:

Hyper inflammatory state is the possible mechanism of anemia in the elderly.

This is characterized by: -increased hepcidin production in the liver negative impact on erythropoiesis and increased iron retention in the reticuloendothelial system.

Insufficient erythropoietin (EPO).

Increased phagocytosis of aging erythrocytes.

The concept of a subclinical proinflammatory state called inflammaging may be a good explanation for the development of anemia at older age.

DIAGNOSTIC ASPECTS:

Routine investigations: Complete blood count with MCV, MCH; reticulocyte count.

Other investigations include: Ferritin, reticulocyte Hb, transferrin saturation, EPO level, CRP, fibrinogen; Creatinine/GFR; Vitamin B12/folate/copper; LDH; haptoglobin; ALT/AST; Serum electrophoresis.



The Medical **Bulletin**

Imaging studies as per the patient's clinical profile.

Bone marrow studies should be performed in those patients who have high index of suspicion for haematological conditions like myelodysplastic syndrome (MDS).

MANAGEMENT:

Depends on the underlying etiology- individualized treatment like iron supplementation; erythropoietin stimulating agents (ESA) etc.,

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