



The Medical **Bulletin**

In Nephrology

Kidney Pearls

- Anemia is common in patients with chronic kidney disease even in the early stages and may be seen in 80% in those with advanced chronic kidney disease.
- Many patients of CKD with anemia seek treatment from general practitioners and also physicians.
- Anemia in CKD is due to various reasons which include iron deficiency, deficiency of vitamin B12 or folic acid due to poor nutrition and poor appetite
- Other important reasons may be blood loss, hemolysis and deficiency of erythropoietin
- Erythropoietin deficiency is an important cause of anemia in CKD as kidney produces erythropoietin which helps in blood formation in the bone marrow
- Lab evaluation should include complete blood picture, reticulocyte count, RBC indices, Iron profile (serum iron, serum ferritin and Transferrin saturation, B12 and folate levels, stool for occult blood
- In some cases hyperparathyroidism, which is common in CKD, can cause bone marrow fibrosis which is again an important cause of anemia
- Iron deficiency is characterized by hypochromic microcytic RBC and low transferrin saturation ie <30% and low Ferritin.
- Anemia due to erythropoietin deficiency is normocytic and normochromic and the iron profile is normal.
- Anemia leads to breathlessness, tachycardia, poor sleep, poor cognition, easy fatigue and Congestive heart failure.
- In case of iron deficiency iron injections can be given which include iron sucrose, iron ferric carboxy maltose, iron isomaltoside. These should be given slowly according to the instructions
- Oral iron is generally not well absorbed in CKD and may not be helpful. Newer oral preparations ie Carbonyl iron, liposomal iron may have a better bio availability.
- Ferric citrate oral iron is a novel preparation which also helps to reduce hyperphosphatemia in CKD
- Once iron deficiency is corrected erythropoietin can be given.



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- Erythropoietin can be short acting which is given weekly thrice SC in a dose of 100 units /kg
- Long acting erythropoietin can be given once a week and include Darbepoietin and Pegylated erythropoietin. Continuous erythropoietin receptor activator (CERA) can be given monthly once.
- New molecules HIF-PHIs are the latest drugs available for management of anemia in CKD. They act by increasing endogenous Erythropoietin. These are now available in Indian market. Tab Desidustat 50mg 2 tablets can be used on alternate days under the advice of nephrologist.

Dr. Manisha Shahay