ANEMIA MANAGEMENT

Lot of work still pending!

Dr. Waqar Ahmad

In chronic kidney disease (CKD) patients, anaemia is defined as haemoglobin (Hb) less than 13g/dl and 12g/dl in males and females respectively[1]. Anemia poses a great hazard to the general wellbeing cardiac outcome in patienrts of CKD. Certain guidelines have been established on the basis of various studies for monitoring the effect of anemia and its correction on health of CKD, dialysis and non-dialysis patients[2-3].

Initial work up of patient labeled as anaemic on the basis of above mentioned criteria should include complete blood count (CBC), absolute reticulocyte count, serum ferritin level, TSAT, serum vitamin B12 and folate levels including Hb concentration, red cell indices, white blood cell count, and differential and platelet count. The main aim of the anaemia management in CKD patients is to avoid blood transfusions and alleviate the symptoms associated with anaemia.

First step in management includes correction of serum iron and maintaining TSAT ≥ 30% and serum ferrtitin ≥ 500mg/l[2-4]. Appropriate serum iron concentrations will help in minimizing the dose of erythropoietin and need of blood transfusion. Either oral or intravenous (IV) preparations of iron can be used based on the level of iron deficiency, anaemia and symptoms. In this first issue of PJKD three articles from three tertiary care center does not reveal a very good picture about management of anemia in kidney disease[5-7]. Study by Anees et al. is alarming due to the frequent transfusions even in pre dialysis patients rendering them exposure to hepatitis and HIV. In CKD patients not on dialysis oral therapy is preferred and can effectively improve the Hb levels[2]. Possible side effects of IV iron replacement including anaphylactoid type reactions should be considered before deciding route of iron therapy and weighed against potential benefits[8]. Erythropoietin stimulating agent treatment (ESA) should be initiated if Hb levels fall below 10mg/dl. Lower limit for Hb in dialysis patient should be not less than 9mg/dl. Hb levels of 9.5 to 11.5 are associated with better outcomes in dialysis patients[2]. All the patients should be kept on appropriate doses of ESA treatment in an attempt to maintain levels above 10mg/dl.

Patients failing to show any increase in haemoglobin level after one month of initiation of ESA therapy are labeled as hypo responsive patients. In such patients ESA dose should not be increased above double of baseline and factors hindering ESA response should be identified[2]. These may include chronic inflammatory state, hyperparathyroidism, angiotensisn converting enzyme inhibitors or receptor blockers, inadequate dialysis, primary bone marrow disorders, haemoglobinopathies, hemolysis, myelosuppressive agents and hypertension.

In patients non responding to ESA therapy escalation of ESA dose twice the baseline is not recommended. Such patients may benefit from evaluation of pure red cell apalasia due to antibodies against Erythropoietin red cell[2]. Blood product transfusion should be avoided in patients candidate for renal transplant to avoid allograft sensitization.

Reprint request to:
Dr. Waqar Ahmad
Department of Nephrology
Sheikh Zayd Hospital, Lahore, Pakistan
Email: waqar3013@gmail.com

REFERENCE

1. Babitt JL, Lin HY. Mechanisms of Anemia in CKD. J Am Nephrol. 2012;23(10):1631-1634

2. KDIGO clinical practice guidelines for anemia in chronic kidney disease.Kidney Int Suppl 2012; 2:288.

3. Kliger AS, Foley RN, Goldfarb DS, et al. KDOQI US Commentary of KDIGO Clinical Practice Guideline for Anemia in CKD. Am J Kidney Dis. 2013;62(5):849-859.

4. Strippoli GF, Craig JC, Manno C, Schena FP. Hemoglobin targets for the anemia of chronic kidney disease: a meta-analysis of randomized, controlled trials. J Am Soc Nephrol 2004; 15:3154.

5. Anees M, Ilahi I, Mateen F, Ahmad S, Hussain Y, Ibrahim M.PJKD,2017;1(1)[8-13].

6. Omer S, Riaz M, Abbas G, Pervaiz P, Azhar A, Usman HS, Khan MA, Tarif N. anemia in hemodialysis patients experience from a tertiary care hospital.
   Pak J Kidney Dis 2017;1(1)[17-19]

7. Baig I. Ahmad W, Ikram M, Rahman I. Prevalence of anemia in dialysis patients. Pak J Kidney Dis 2017;1(1) [14-16]

8. Li H, Wang SX. Intravenous iron sucrose in Chinese hemodialysis patients with renal anemia. Blood Purif 2008; 26: 151.