PREVALENCE OF ANEMIA: AUDIT OF A LARGE SINGLE CENTER HEMODIALYSIS PATIENT POPULATION

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Abstract

Introduction: Chronic kidney disease (CKD) is increasingly being recognized as a global public health problem. Anemia is the most common manifestation and challenging problem in our dialysis population leading to multiple complications and poor quality of life.

Methods: It was a cross sectional study done on 141 hemodialysis patients being dialyzed twice per week at Hijaz Hospital Lahore. The target hemoglobin level was according to KDIGO 2012 guidelines, 10-11.5g/dl.

Results: Out of 141 patients, 69(48.9%) patients were found to be anemic. Among them 22(33.3%) were females and 47(66.6%) were male patients.

Conclusion: In this study almost half of the patients were suffering from anemia suggesting that we still need to improve our practices regarding this aspect in our dialysis patients.

Key words: *Chronic kidney disease, anemia, erythropoietin, hemodialysis.*

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Introduction

Chronic kidney disease (CKD) is increasingly being recognized as a global public health problem. In Pakistan its prevalence is 12.5% according to a local study.[1] Anemia is the most common manifestation of chronic kidney disease (CKD).[2] CKD results in inadequate renal secretion of erythropoietin leading to anemia which is the main etiological reason other than iron deficiency,vitB12 deficiency, inadequate dialysis, bleeding diathesis, drugs and others.[3,4] More

than 30% of patients already have hemoglobin (Hb) levels <12 g/dL by Stage 3 CKD.[5] Anemia is associated with a more rapid decline in glomerular filtration rate (GFR), is considered to be a major risk factor for progression of renal disease in non-dialysis CKD patients.[6] Anemia leads to increased risk of cardiovascular disease, poor cognitive functions, fatigability and poor quality of life.[7] Thus, management of anemia throughout the CKD continuum is essential.[8] Management of anemia is a big challenge in our country due to financial constraints and poor compliance of patients.

Methods:

It was a cross sectional study conducted in Hijaz Hospital Lahore on patients undergoing hemodialysis. There were total 141 patients. The data was collected for the month of July2017.

Results

There were total 141 patients out of which 94(66.6%) were males and 47(33.3%) were females. Anemia was observed in majority of patients, 69(48.9%) patients had hemoglobin level less than 10g/dl whereas 72(51.06%) were having hemoglobin above 10g/dl. Among anemic patients 47(68.1%) were males and 22(31.8%)were females. There were 22 patients whose hemoglobin level were above 11.5g/dl whose ESA is either decreased or stopped and hemoglobin is being monitored according to guidelines. Out of these 141 patients one female was having persistent anemia due gastrointestinal bleeding and requiring regular transfusions.

Table 1: Hemoglobin levels in 141 hemodialysis patients according to gender and levels of hemoglobin.

Gender	Hb<10	Hb>10	Total
Male	47{68.1%}	47{65.2%}	94{66.6%}
Female	22{31.8%}	25{34.7%}	47{33.3%}
Total	69{48.9%}	72{51.06%}	141

Discussion

Anemia is a major problem that is faced by patients suffering from chronic kidney disease . The target levels suggested by KDIGO guidelines in 2012 were between 10-11.5gm/dl which is still debatable due to lack of sufficient data[9].

In our dialysis center, almost all patients are receiving erythropoietin according to their hemoglobin levels. However major cause of anemia in these patients is probably iron deficiency. This initial report has helped us to understand the degree of problem. The major reason for anemia in our population is non compliance to oral iron supplements and other hematinic. Secondly due to financial constrains serum ferritin, serum iron levels and total iron binding capacity are not being monitored according to guidelines leading to iron deficiency and anemia

despite of availability of ESA. However, patients are being prescribed parenteral iron on the basis of their available MCV and MCHC time to time. Therefore, financial limitations on the part of patients as well as institutions, and poor compliance and follow up of patients leads to difficulties in management of anemia. Other causes of anemia including inadequate dialysis, bleeding diathesis, hyperparathyroidism, vitamin B12 deficiency, coagulopathies, low serum albumin levels and inflammatory conditions which are investigated as required while treating anemia in a patient with end stage renal disease.

Conclusion

Anemia is a major problem in our dialysis population and half of our dialysis population is suffering from anemia. So its management needs proper follow up, counselling of patients and financial support.

Conflict of Interest: None declared

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