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Research Article

HEMATOLOGICAL PROFILE IN PATIENTS WITH CHRONIC KIDNEY DISEASE

¹Dr. Muhammad Nadeem Ahsan, ²Dr. Pooran Mal, ³Dr. Mukhtiar Ahmed Abro,
⁴Dr. Hamid Nawaz Ali Memon, ⁵Dr. Imran Karim and ^{*6}Dr. Samar Raza

¹Department of Nephrology Dow University of Health Sciences Karachi, ²Department of Nephrology, Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro,

³Department of Medicine, Peoples University of Medical and Health Sciences for Women Nawabshah / Shaheed Benazirabad, ⁴Zulekha Hospital Dubai United Arab Emirates,

⁵Department of Medicine, Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro, ⁶Liaquat University Hospital Hyderabad / Jamshoro

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Abstract:

***Objective:** To determine the hematological profile in patients with chronic kidney disease.*

***Patients and Methods:** A total of fifty patients of chronic kidney disease were explored and included in the study. The cross-sectional survey includes patients diagnosed as CKD of >18 year old and either gender while the exclusion criteria were patients with systemic illness without renal failure, pregnant and lactating mothers, aplastic anemia, hematological malignancy and history of blood transfusion and the participants who refused to give consent for the study. Anemia was defined as Hb <12 g/dl, further anemia was categorized into mild, moderate and severe with Hb% as 9-11 gm, 7-9 gm and <7 gm respectively whereas the frequency / percentages (%) and means \pm SD computed for study variables.*

***Results:** During six month study period total fifty patients had chronic kidney disease were explored and study. The mean \pm SD for age (yrs) of population was 55.73 \pm 7.70. Regarding gender male 20 (40%) and female 30 (60%) while the anemia mild 15 (30%), moderate 25 (50%) and severe 10 (20%).*

***Conclusion:** Anemia is an extremely basic clinical appearance in patients of Chronic Kidney Disease.*

KeyWords: Anemia and chronic kidney disease

Corresponding author:

***Dr. Samar Raza,**

Liaquat University Hospital Hyderabad / Jamshoro.

Email: zulfikar229@hotmail.com

QR code



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INTRODUCTION:

Chronic Kidney Disease prompts a wide scope of foundational confusions. Iron deficiency is a typical appearance among patients of CKD. As the renal brokenness increments in seriousness, there is relative increment in commonness and seriousness of hematological hindrance [1]. Paleness is a significant contributing element in the clinical indications related with falling apart renal capacity [2]. There is expanded occurrence of cardiovascular brokenness, intellectual disability and rest unsettling influences in pallid patients with CKD [3]. It is additionally connected with movement of renal infection and expanded mortality. Expanded medicinal services costs and worsened personal satisfaction are different issues of worry in CKD patients with Anemia. Pathophysiologically, Anemia in patients of CKD is controlled by numerous variables. The most significant and essential factor is the insufficient generation of Erythropoetin (EPO) by the harmed kidneys [4]. Kidney is a noteworthy site for EPO creation, contributing 80-90% of all out EPO available for use (rest 10-20% delivered in liver). As renal ailment advances particular peritubular cells that produce EPO are somewhat or totally drained or

harmed coming about improperly low EPO levels bringing about dynamic paleness

PATIENTS AND METHODS:

A total of fifty patients of chronic kidney disease were explored and included in the study. The cross-sectional survey includes patients diagnosed as CKD of >18 year old and either gender while the exclusion criteria were patients with systemic illness without renal failure, pregnant and lactating mothers, aplastic anemia, hematological malignancy and history of blood transfusion and the participants who refused to give consent for the study. Anemia was defined as Hb <12 g/dl, further anemia was categorized into mild, moderate and severe with Hb% as 9-11 gm, 7-9 gm and <7 gm respectively. The data was collected on pre-designed proforma and analyzed in SPSS to manipulate the frequencies and percentages.

RESULTS:

During six month study period total fifty patients had chronic kidney disease were explored and study. The mean \pm SD for age (yrS) of population was 55.73 \pm 7.70. The demographical and clinical profile of study population is presented in Table 1.

TABLE 1: The Demographical And Clinical Profile Of Study Population

Parameter	Frequency (N=50)	Percentage (%)
AGE (yrs)		
20-29	06	12
30-39	08	16
40-49	14	28
50-59	13	26
60+	09	18
GENDER		
Male	20	40
Female	30	60
RESIDENCE		
Urban	22	44
Rural	28	56
CO-MORBIDITIES		
Hypertension	33	66
Diabetes mellitus	17	34
Ischemic heart disease	19	38
COPD	12	24
ANEMIA		
Mild	15	30
Moderate	25	50
Severe	10	20
CKD STAGES		
1	03	6.0
2	09	18
3	12	24
4	12	24
5	14	28

DISCUSSION:

Chronic Kidney Disease is an ailment characterized by irreversible renal brokenness brought about by an assortment of illnesses. The most widely recognized basic issue coming about in CKD incorporate Diabetes Mellitus, hypertension and chronic glomerulonephritis. Dynamic harm to kidneys at last outcomes in contribution of each organ arrangement of the body, our results demonstrated that some level of anemia was found in every one of the patients, recommending a commonness of 100% in our study populace. This is in simultaneousness with the discoveries in past examinations which have demonstrated a high predominance of iron deficiency in CKD patients [5, 6]. The vast majority of the patients in our investigation had normocytic normochromic anemia on fringe blood smear assessment, trailed by microcytic hypochromic anemia. Macrocytic picture was also observed in present series. The overwhelmingly normocytic normochromic picture on PBF is a direct result of the supreme inadequacy of Erythropoietin (Epo) with dynamic renal disorder. Majority of past series have demonstrated comparative discoveries with respect to morphological picture of anemia [7, 8].

CONCLUSION:

Anemia is an extremely basic clinical appearance in patients of Chronic Kidney Disease. The most widely recognized morphological sort of Anemia found in our examination was normocytic normochromic type. The executives of paleness with iron and erythropoietin treatment is a significant remedial intercession in the ideal treatment of patients with chronic kidney disease.

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