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Research Article

**IRON DEFICIENCY ANEMIA FREQUENCY IN RURAL AREA
OF DISTRICT LAYYAH. A DETAILED STUDY OF LESS IRON
VALUES IN PATIENTS**¹ Muzaffar Munir, ² Tanveer Ahmed, ³ Farzana Muneer¹. Medical Officer, THQ Hospital Chowk Azam Layyah². Medical Officer, THQ Hospital Chowk Azam Layyah³. Medical Officer, THQ Hospital Chowk Azam Layyah**Abstract:**

Background: Anemia is the state or condition in which the volume of blood to take oxygen is less than the capacity required. This retrospective study was conducted to analyze the immensity of Deficiency of Iron Anemia in THQ Hospital Chowk Azam Layyah, during from Feb 2017 to January 2018 to evaluate the prevalence different stages of anemic patients in this area.

Aim: Objective of this study was to evaluate the prevalence of different anemic grades in patients to give better treatment and to improve quality of life of patients.

Methods: Two hundred patients were included in this study who met all the criteria needed to this study. In this study we examined blood tests, CBC reports of all patients in the laboratory. Moreover, including detailed patient's history, previous diseases, current diseases, anemia history in family, gynecological history of women were examined.

Results: In all two hundred anemic patients, we found one hundred and seventy (85%) patients had deficiency of iron and 30 (15%) patients had inadequacy of non-iron (lack of other minerals) anemia. Most of the patients (58.8%) who had less volume of iron were aged of 21 to 32 Years. On basis of serum ferritin level (SFL), We observed the intensity of deficiency of iron and classify into modest, mildest and acute groups. We found 120 (70.6%) patients had modest IDA (iron deficiency anemia), 20 (11.8%) patients had acute and rest (17.6%) had mildest deficiency of iron anemia. In 160 IDA patient's women were 95 (55.9%), 40 (23.5%) were men > 19 years and 35 (20.6%) were growing children had an aged < 14 years.

Conclusion: In this study, we observed deficiency of iron is the most frequent cause in patients of anemia, especially in females.

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INTRODUCTION:

Anemia is the condition in which the volume of blood (hemoglobin level) to take oxygen is less than the required volume of blood in normal with respect to his sex, age and physiological state.[1] Deficiency of iron anemia patients population is increasing in all over the world, mostly in rural areas population.. It may be due to lack of resources, no awareness and less diet. [2]

Iron deficiency is mostly observed in that state when need of iron is much important i.e. growing children and pregnant women. It is also found in elderly aged people due to less hemoglobin level, weakness, no healthy diet and loss of blood in any incident. [3] Deficiency of iron anemia is the most common observation in whole world population.

The less Hb level than required volume has been measured for anemia definition as 12 and 13gm/dl in women and men. We can further categorized deficiency of iron anemia into modest, mildest and acute depends on their Hb values.[7,8,9] Anemia may caused due to deficiency of three main minerals such as iron, folic acid and VitB12.[5] But we observed the most frequent and most common cause of anemia is deficiency of iron and it is similar to the other studies. According to the WHO research, about twenty to thirty% of non-pregnant women and fifty to sixty% of growing children found anemic in under developed countries. [6]

In Pakistan, Deficiency of iron is the most common cause of anemia and mostly observed in pregnant women. [12] Different studies regarding to IDA have been conducted in different areas of Pakistan to examined/evaluate the frequency of this main health related disease. [8,10] This retrospective study was conducted to evaluate the frequency of IDA to maintain a better treatment and to reduce the death ratio and to improve quality of life of patients affected by anemia.

METHODS:

This descriptive study was conducted at THQ Hospital Chowk Azam Layyah, during from Feb 2017 to January 2018. In this study two hundred patients were included and their Hb values were less than 9gram/dl. We were included the complete history of all the patients after taking their consent, regarding their age, sex, previous diseases history, current diseases, IDA history in family, loss of blood details, use of drugs, malaria, diarrhoea, diet history and details, In women gynecological history.

In this study we conducted a detailed and complete examination of physical health of all the patients. We examined patient's blood tests, Hb Level, SFL, CBC reports were examined in the laboratory. Platelets were also counted. We considered SFL for acute ID is less than 14ng/dl. Hb values were considered to examined the designated limit in women and men were ten to 12gm/dl.

RESULTS:

In this study, we observed that the deficiency of iron is the main cause of anemia in all the patients included in this study. From all two hundred patients, we found one hundred and seventy (85%) patients had less iron frequency (value) and 30 (15%) patients had non-iron anemia. Most of the patients (58.8%) who had deficiency of iron were aged of 21 to 32 years. On basis of serum ferritin level (SFL), We observed the intensity of deficiency of iron and classify into modest, mildest and acute groups. We found 120 (70.6%) patients had modest IDA (iron deficiency anemia), 20 (11.8%) patients had acute and rest (17.6) had mildest deficiency of iron anemia. In 170 IDA patient's women were 95 (55.9%), 40 (23.5%) were men > 19 years and 35 (20.6%) were growing children had an aged < 13 years.

Table 1. Deficiency of iron anemia patients

Characteristic	Frequency	Percentage
Deficiency of Iron Men=40 Women=95 Children<13=35	[170]	[85]
Deficiency of other minerals	30	15

Table 2: Age wise distribution of patients

Participants	Frequency	Percentage
8-13	35	20.6
14-20	-	0
21-26	49	28.8
27-32	51	30.0
33-38	20	11.8
39-44	15	8.8

Table 3. SFL (serum ferritin level)

SFL	Frequency	Percentage
F <14ng/dl	20	11.8
F 14-44	120	70.6
F 45-99	30	17.6

Table 4:

Category/group	Percentage	Frequency
Modest IDA	120	70.6
Acute IDA	20	11.8
Mildest IDA	30	17.6

DISCUSSION:

Millions of people in the world has been affected by Anemia, it is due to many latent causes such as poor financial status, unhealthy diet, lack of awareness, poor literacy ratio in developed countries and also in rural areas of under developing countries. These causes reflect the acuteness of this disease. In Pakistan, most of studies have been conducted on anemia/iron deficiency on growing children and females in different areas. This study was conducted to evaluate the causes of Deficiency of iron anemia to provide better treatment and to reduce the morbidity.

We found that the frequency of deficiency of iron anemia is too high in this area of Pakistan. It may be due to lack of education, poor financial status, lack of health related facilities, lack of awareness about IDA. In this study we found IDA mostly in growing children and in females. In women deficiency of iron anemia ration was high due to their gynecological problems.

In this study the common reasons/causes/factors not included because our main focus was to examined the frequency of deficiency of iron anemia a most frequently problem regarding to health in the whole world. Moreover, this is not a sufficient research, we should have to evaluate the significance and factors related to this disease for better treatment and to reduce the morbidity and to improve the quality of life of anemic patients.

CONCLUSION:

It is observed that deficiency of iron is most frequent cause of anemia mostly in women and growing age children. Many elements involved in the high frequency of this disease, such as poor financial status, low literacy level, awareness of nutrition and minerals etc. We should have to overcome to these factors so that the ratio of this disease could be decrease in this area of Pakistan.

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