

A study of clinical profile of the patients with anemia at tertiary health care center

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Abstract

Background: Anemia is the most commonly found condition in hematology and is defined as a decrease in red blood cell mass (RBC) or hemoglobin due to variable causes. **Aims and Objectives:** To study clinical profile of the patients with anemia at tertiary health care center. **Methodology:** This was a cross-sectional study carried out in the patients admitted to the department of medicine during the one year period i.e. March 2017 to March 2018, so during the one year period there were 88 patients with anemia were admitted included to study. WHO criteria was used to diagnose based on Hb. concentration All details of the patients like age, sex, clinical features etc. Were noted. All details were entered to excel sheets and analyzed by Excel software for windows 10. **Result:** The majority of the patients were in the age group of ≥ 60 were 26.14%, followed by 50-59 were 19.32%, 40-49 were 17.05%, 30-39 were 14.77%, 20-29 were 12.50%, 12-19 were 10.23%. The majority of the patients were Female - 56.82% and in Male i.e. 43.18%. The most common clinical features Fatigue-100%, Tiredness-100%, Giddiness-60%, Dyspnea in 42%, Fever in 42%, Weight loss in 32%, Palpitations in 28%, Abdominal pain in 24%, Oedema in 20%, Bleeding Diathesis in 20%, Paraesthesia in 16%, Chest pain in 14%, Jaundice in 12%, Diarrhea in 6%, Blood Loss in 6%, Focal neurology deficit in 2%. **Conclusion:** It can be concluded from our study that the majority of the patients were in the age group of ≥ 60 , The majority of the patients were Female, The most common clinical features Fatigue, Tiredness, Giddiness, Dyspnea, Fever, Weight loss, Palpitations etc.

Key Word: Anemia, Hemoglobin Concentration, Symptoms of Anemia, Type of Anemia

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INTRODUCTION

Anemia is the most commonly found condition in hematology and is defined as a decrease in red blood cell mass (RBC) or hemoglobin due to variable causes.¹ Iron deficiency anemia is the most common type of anemia overall and it has many causes. It is caused by insufficient dietary intake, especially in children and women in the developing countries or poor absorption of iron to replace losses from menstruation or losses due to diseases.^{2,3} Anemia is clinically defined as a condition where

hemoglobin level in the blood is below the lowered extreme of the normal range for the age and sex of the individual. The standard given for anemia by Wintrobe MM is hemoglobin below 14gm% in adult males and below 12gm% in adult females.⁴ The World Health Organization defines anemia as hemoglobin level less than 13g/dl in adult males and less than 12 g/dl in adult females and less than 11g/dl in pregnant females.⁵

METHODOLOGY

This was a cross-sectional study carried out in the patients admitted to the department of medicine during the one year period i.e. March 2017 to March 2018, so during the one year period there were 88 patients with anemia were admitted included to study. WHO criteria was used to diagnose based on Hb. concentration. All details of the patients like age, sex, clinical features etc. Were noted. All details were entered to excel sheets and analyzed by Excel software for windows 10.

RESULT

Table 1: Distribution of the patients as per the Age

Age	No.	Percentage (%)
12-19	9	10.23
20-29	11	12.50
30-39	13	14.77
40-49	15	17.05
50-59	17	19.32
≥60	23	26.14
Total	88	100.00

The majority of the patients were in the age group of ≥60 were 26.14%, followed by 50-59 were 19.32%, 40-49 were 17.05%, 30-39 were 14.77%, 20-29 were 12.50%, 12-19 were 10.23%.

Table 2: Distribution of the patients as per the sex

Sex	No.	Percentage (%)
Male	38	43.18
Female	50	56.82
Total	88	100.00

The majority of the patients were Female - 56.82% and in Male i.e. 43.18% .

Table 3: Distribution of the patients as per the clinical features

Symptoms	Number of patients	Percentage(%)
Fatigue	88	100
Tiredness	88	100
Giddiness	53	60
Dyspnea	37	42
Fever	37	42
Weight loss	28	32
Palpitations	25	28
Abdominal pain	21	24
Oedema	18	20
Bleeding Diathesis	18	20
Paraesthesia	14	16
Chest pain	12	14
Jaundice	11	12
Diarrhea	5	6
Blood Loss	5	6
Focal neurological deficit	2	2

The most common clinical features Fatigue-100%, Tiredness-100%, Giddiness-60%, Dyspnea in 42%, Fever in 42%, Weight loss in 32%, Palpitations in 28%, Abdominal pain in 24%, Oedema in 20%, Bleeding Diathesis in 20%, Paraesthesia in 16%, Chest pain in 14%, Jaundice in 12%, Diarrhea in 6%, Blood Loss in 6%, Focal neurology deficit in 2%.

DISCUSSION

Causes of anemia are varied and range from iron deficiency, vitamin B12 and folic acid deficiency, malaria, hookworm infestations, schistosomiasis, renal diseases and other chronic infections that play an Iron deficiency anemia is the commonest nutritional disease and second cause of nutritional anemia is folate deficiency closely

followed by vitamin B12 and folic acid deficiency. Hemoglobin plays a key role in transporting oxygen to tissues and accounts for the decreased work capacity and physical performance of person with a decreased concentration. The biological basis of the impaired development and altered behaviour is unclear, although it may be related to certain functional changes at the cellular level e.g. alteration in certain iron containing enzymes. Anemia is not a disease, but it is a manifestation of underlying disease pathology. Compensatory mechanisms work till the hemoglobin drops to 7gm%. These patients become symptomatic and rapidly develop fatigue on exertion.^{6,7} Though anemia due to iron deficiency is quite common in India there has been little work done on the incidence of etiopathogenesis of severe anemia without apparent cause. Anemia is prevalent throughout the world. Certain common patterns emerged from various studies conducted in many populations. Globally, anemia affects 1.62 billion people, which corresponds to 24.8% of the population. The highest prevalence is in preschool age children and the lowest prevalence is in adult male cohort. The population group with the greatest number of individuals affected is non-pregnant female cohort. Multicentric studies conducted by ICMR showed anemia prevalence in India in 16-70 years age group was 47.9%. The age adjusted prevalence was 46.1%. The prevalence of anemia was higher among females than males. Prevalence of anemia was maximum (52.8%) in males of more than 45 years age whereas among females subgroup, younger females less than 30 years age had higher prevalence of anemia⁸. In our study we have seen that The majority of the patients were in the age group of ≥60 were 26.14%, followed by 50-59 were 19.32%, 40-49 were 17.05%, 30-39 were 14.77%, 20-29 were 12.50%, 12-19 were 10.23%. Prevalence increased in old age this could be due to the fact that in old age there decreased absorption of nutrients like iron, Vit.B12 or decreased oral intake may be due to loss of teeth's or underlying factors like Kidney disease (CKD) may be linked to this. The majority of the patients were Female - 56.82% and in Male i.e. 43.18% Kumar R *et al*, who found that the prevalence of anemia was twice as common among males as females.^{9,13} The most common clinical features Fatigue-100%, Tiredness-100%, Giddiness-60%, Dyspnea in 42%, Fever in 42%, Weight loss in 32%, Palpitations in 28%, Abdominal pain in 24%, Oedema in 20%, Bleeding Diathesis in 20%, Paraesthesia in 16%, Chest pain in 14%, Jaundice in 12%, Diarrhea in 6%, Blood Loss in 6%, Focal neurology deficit in 2%. Vineetha *et al*, also noted that the most common symptom was generalized weakness followed by pallor in 83.5%, fever in 53.5% and splenomegaly in 18% of the cases.¹⁴ Gayathri *et al*, had more similar observations compared to the present study like 89% with generalized

weakens, 92% with pallor, 46% with fever and 30% with splenomegaly.¹²

CONCLUSION

It can be concluded from our study that The majority of the patients were in the age group of ≥ 60 , The majority of the patients were Female, The most common clinical features Fatigue, Tiredness, Giddiness, Dyspnea, Fever, Weight loss, Palpitations etc.

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