

Original Research

Assessment of cases of Anemia in patients reporting to a Tertiary Health Care Centre- A Clinical Study

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ABSTRACT:

Background: Anemia is a condition in which the number of red blood cells is insufficient to meet the body's physiologic needs. The present study was conducted to assess the cases of anemia. **Materials & Methods:** The present study was conducted on 225 patients visited to department. Patient information such as name, age, gender, family history, dietary history and hemoglobin (Hb) level was estimated by the cyanmethemoglobin method. **Results:** Out of 225 patients, male were 90 and females were 135. Mild anemia was seen in 30 males and 50 females. Moderate was seen in 25 males and 20 females. Severe was seen in 35 males and 65 females. Socio- economic status was low in 40 males and 51 females, middle in 30 males and 50 females and high in 20 males and 34 females. The difference was significant ($P < 0.05$).

Conclusion: Anemia was common in females. Severe type was common and patients with low socio- economic status was seen in maximum patients.

Key words: Anemia, Hemoglobin, Socio- economic

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INTRODUCTION

Anemia is a condition in which the number of red blood cells (and consequently their oxygen-carrying capacity) is insufficient to meet the body's physiologic needs.¹ Specific physiologic needs vary with a person's age, gender, residential elevation above sea level (altitude), smoking behaviour, and different stages of pregnancy. Iron deficiency is thought to be the most common cause of anemia globally, but other nutritional deficiencies (including folate, vitamin B12 and vitamin A), acute and chronic inflammation, parasitic infections, and inherited or acquired disorders that affect haemoglobin synthesis, red blood cell production or red blood cell survival, can all cause anemia.²

Anemia affects 1.62 billion people, which corresponds to 24.8% of the population. Anemia is one of the most common health problems in India which is much more

prevalent in the rural than in the urban areas. The prevalence of anemia in pregnant and lactating females and children has been found to vary from 50-90% in different parts of India.³ Anemia in young children is a serious concern because it can result in an impaired cognitive performance, behavioural and motor development, lack of co-ordination, language development and scholastic achievement, as well as an increased morbidity from infectious diseases. The prevalence of anemia and moderate-severe anemia varied among races. For all age groups, blacks had the highest prevalence of anemia for both sexes.⁴ The present study was conducted to assess the cases of anemia.

MATERIALS & METHODS

The present study was conducted in department of internal medicine. It comprised of 225 patients visited to

department. They were informed regarding the study and written consent was obtained. The study protocol was approved from institutional committee.

Patient information such as name, age, gender, family history, dietary history and hemoglobin (Hb) level was estimated by the cyanmethemoglobin method. BMI was

calculated as the weight in kilograms, divided by the square of the height in meters. The BMI was further categorized into low (<18.5 kg/m²), normal (18.5-24.9 kg/m²) and high (>25 kg/m²). Results were tabulated and subjected to statistical analysis using chi square test. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

| Total - 225 | | |
|-------------|------|--------|
| Gender | Male | Female |
| Number | 90 | 135 |

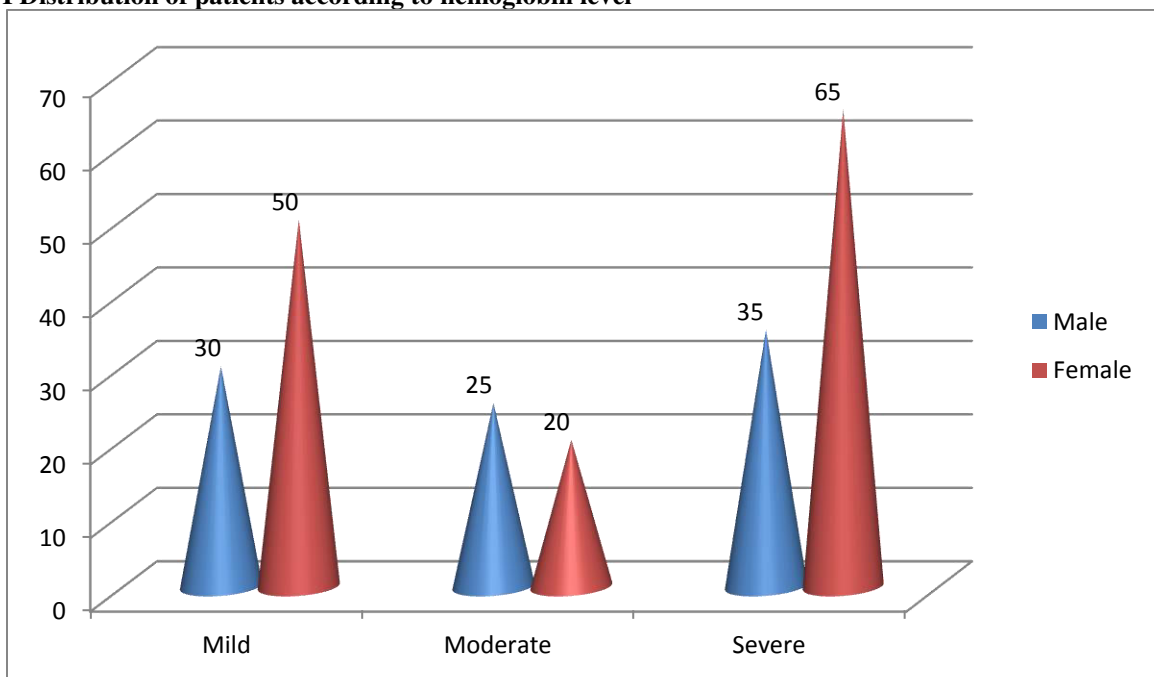
Table I shows that out of 225 patients, male were 90 and females were 135.

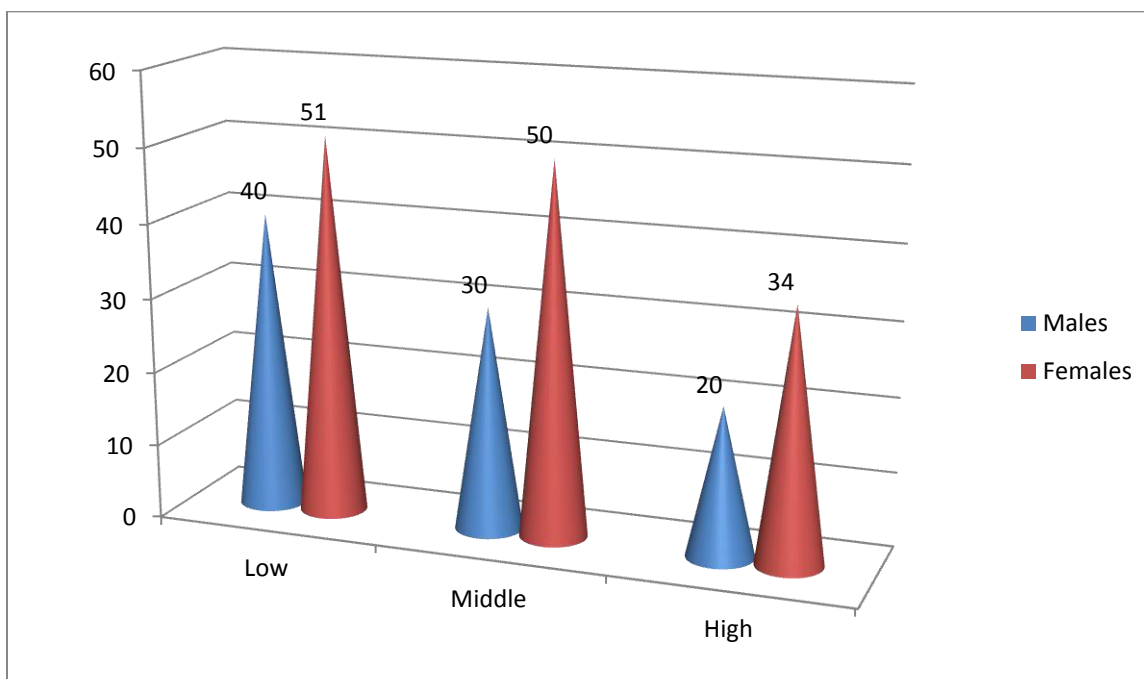
Table II Distribution of patients according to hemoglobin level

| Anemia | Male | Female |
|----------|------|--------|
| Mild | 30 | 50 |
| Moderate | 25 | 20 |
| Severe | 35 | 65 |

Table II shows that mild anemia was seen in 30 males and 50 females. Moderate was seen in 25 males and 20 females. Severe was seen in 35 males and 65 females.

Graph I Distribution of patients according to hemoglobin level



Graph II Socio- economic status of patients

Graph II shows that socio- economic status was low in 40 males and 51 females, middle in 30 males and 50 females and high in 20 males and 34 females. The difference was significant ($P < 0.05$).

DISCUSSION

Anemia is a global public health problem which affects both the developing and the developed countries. Anemia is the most common indicator which is used to screen for iron deficiency and so the terms anemia, iron deficiency and iron deficiency anemia are sometimes used interchangeably. It is an indicator of poor nutrition and poor health with major consequences for human health, as well as for the social and economic development of a population.⁵

The concentration of hemoglobin should be measured, even though not all anemia is caused by iron deficiency. The prevalence of anemia is an important health indicator and when it is used with other measurements of iron status the hemoglobin concentration can provide information about the severity of iron deficiency.⁶ The present study was conducted to assess the cases of anemia.

In present study, out of 225 patients, male were 90 and females were 135. A et al⁷ found that rates of anemia in men increased monotonically with age, while that of women increased bimodally with peaks in age group 40±49 years and 80±85 years. The effect of risk factors was observed to compound. For instance, the prevalence of anemia in black women aged 80±85 years was 35.6%, 6.4 times higher than the population average. Moreover, anemia is a growing problem because of the increased prevalence of anemia (4.0% to 7.1%) and moderate-severe anemia (1.0% to 1.9%), which nearly doubled from

2003±2004 to 2011±2012. Thus, these results augment the current knowledge on anemia prevalence, severity, and distribution among subgroups in the US and raised anemia as an issue that requires urgent public health intervention.

We found that mild anemia was seen in 30 males and 50 females. Moderate was seen in 25 males and 20 females. Severe was seen in 35 males and 65 females. The socio-economic status was low in 40 males and 51 females, middle in 30 males and 50 females and high in 20 males and 34 females. Shill et al⁸ in which anemia was detected among university colleges of Bangladesh. In this study, socio- economic status was low in maximum number of patients suggesting the economic status as one of the contributing factor of anemia among population. This is in agreement with study of Kaur.⁹

Ayoub et al¹⁰ suggested that anemia as a global public health problem is compelling and harmful as the epidemics of infectious diseases. They assessed the prevalence of anemia among women. Out of 250 women, 89 (35.6%) had their normal hemoglobin level (>12.0g/dl), 6 (2.4%) had mild anemia (11-11.9 g/dl), 145 (58%) had moderate anemia (8-10.9 g/dl) and 10 (4%) had severe anemia (<8.0 g/dl).

CONCLUSION

Authors suggested that anemia was common in females. Severe type was common and patients with low socio-economic status was seen in maximum patients.

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