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A CLINICAL STUDY ON PREVALENCE AND MANAGEMENT OF ANEMIA IN TERTIARY CARE HOSPITAL

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ABSTRACT

Background: Anemia is a medical condition in which the red blood cell count or hemoglobin is less than normal. For men, anemia is typically defined as hemoglobin level of less than 13.5 gram/100 ml and in women as hemoglobin of less than 12.0 gram/100 ml. During pregnancy anemia is responsible for a lot of complications in women. Anemia remains a serious public health challenge worldwide. **Methodology:** A prospective study on prevalence and management of anemia was conducted in the Government hospital of khammam district of Telangana state. A total of 200 patients were included in the study as per inclusion criteria. All the surveyed people were contacted personally. **Results and discussion:** Subjects were classified based on genders 73% females and 27% males and they were studied according to the age group they belong.The most prevalent type of anemia reported is iron deficiency anemia (95%) and the rare incidence of sickle anemia (2.5%) and anemia due to acute myeloid leukemia (2.5%) is also reported. Anemia management in the effected individuals is done in the following ways: Blood transfusion is opted for the patients with hemoglobin less than 6 grams. For remaining number of patients oral iron supplementations were provided. **Conclusion:** The incidence of anemia is more in females (73%) when compared to males (27%). Factors such as malnutrition and low economic status play a major part in the occurrence of anemia.

KEYWORDS: Anemia, Pregnancy, iron deficiency anemia.

INTRODUCTION

Anemia is a medical condition in which the red blood cell count or hemoglobin is less than normal. For men, anemia is typically defined as hemoglobin level of less than 13.5 gram/100 ml and in women as hemoglobin of less than 12.0 gram/100 ml. Anemia is caused by either a decrease in production of red blood cells or hemoglobin, or an increase in loss (usually due to bleeding) or destruction of red blood cells.[1]

During pregnancy anemia is responsible for a lot of complications in women. Some of those associated problems are less exercise tolerability, puerperal infection, thromboembolic problems, postpartum hemorrhage, pregnancy induced hypertension, placenta praevia, cardiac failure, low birth weight, preterm delivery, and prenatal death. Even if anemia is a worldwide public health problem affecting numerous people in all age groups, particularly the burden of the problem is higher among pregnant women Anemia remains a serious public health challenge worldwide.[2]

Anemia affects more than one billion people worldwide, with pregnant women and children under five years of age comprising the vast majority of those are afflicted. The development of anemia is multifactorial and could stem from a variety of factors. Nutritional deficiencies especially iron, but also folate, vitamin B12, vitamin A and protein appear to be the biggest factor. Infectious diseases, such as malaria and intestinal helminthes, as well as environmental pollutants, such as lead, could also lead to the development of anemia.

Surveillance of anemia is challenging, requiring simultaneous understanding of the epidemiology of its underlying causes. Prevalence is consistently higher in people with low socioeconomic status, low body weight, and in females who have recently given birth. Management of anemia is utmost necessary to avoid further complications. Anemia should be identified and treated properly. The treatment is given based on the severity of condition. Some prescribed with iron supplements and with some dietary instructions and in severe conditions patient may require blood transfusion.[3]

Most of the population (rural, uneducated etc.) are unaware of this medical condition and they misdiagnose

this condition as general weakness hence in such cases prompt treatment is not done which leaded to complicated condition and eventually followed by death in some cases .Thus such conditions should be avoided and proper treatment should be provided to the anemic patients. Proper nourishment and sufficient intake of diet and a healthy life style conditions should be adapted to avoid this deficiency condition.[4]

MATERIALS AND METHODS

A prospective study on prevalence and management of anemia was conducted in the Government hospital of khammam district of Telangana state. The study is conducted for over 6 months i.e., from December 2017 to June 2018. Age groups of 19-70 years both male and female patients (adults and geriatrics) and female patients with pregnancy are also included. People of age group <18 years and patients with chronic diseases like AIDS, Multi-drug resistant TB, Chronic kidney disease were excluded from study. A total of 200 samples were collected and analyzed. 54 males, 86 females and 60

pregnant were studied according to their age group they belong. All the surveyed people were contacted personally. Questionnaires forms were used to levy various parameters. A complete blood cell count were done to confirm the disease in these patients. The variables studied in this study include age, sex, economical status and others. Individuals were classified as symptomatic if they had any abnormality hematological reports such as low levels of cell count.

RESULTS AND DISCUSSION

The following results were obtained upon the analysis of the samples and their distribution is done according to respective categories.

Gender distribution
Table 1: Anemia distribution according to gender.

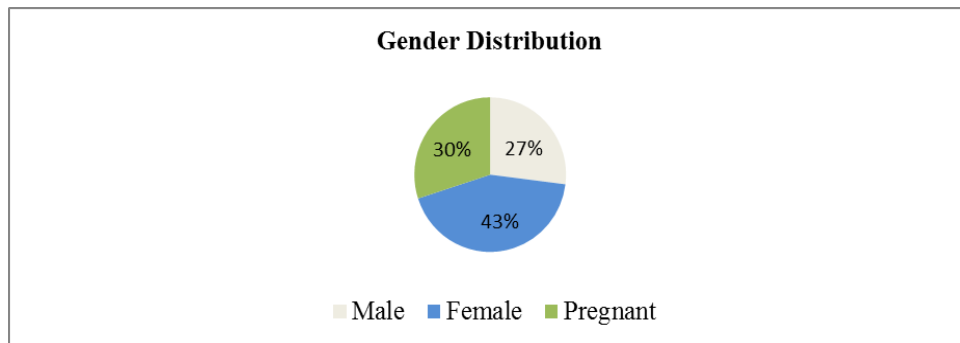|	Male	Female	pregnant
No. of anemia cases	54(27%)	86(43%)	60(30%)

Figure 1: Anemia distribution according to gender.

Distribution according to type of anemia
Table 2: cases classification according to type of anemia in different genders.

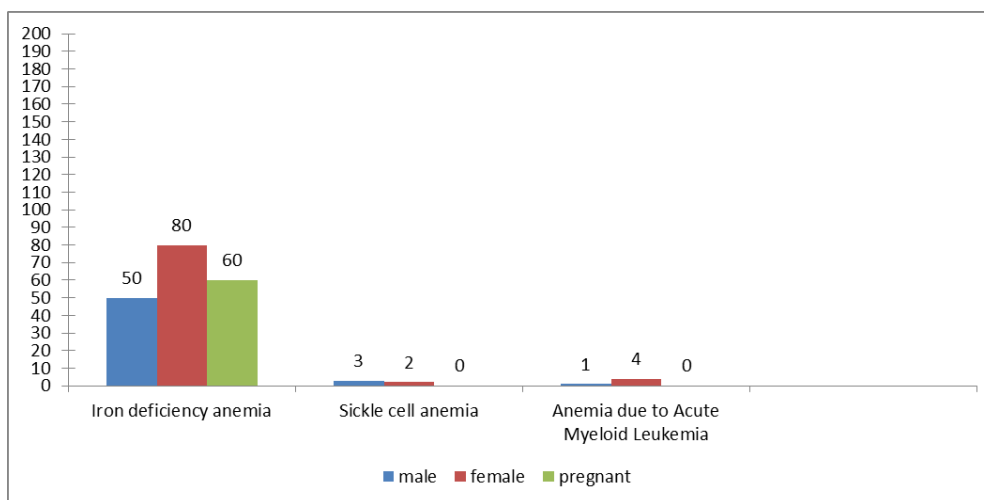| S. no.	Type of anemia	male	female	pregnant	Total	%
1	Iron deficiency anemia	50	80	60	190	95%
2	Sickle cell anemia	3	2	-	5	2.5%
3	Anemia due to Acute Myeloid leukemia	1	4	-	5	2.5%

Figure 2: Distribution according to type of Anemia.
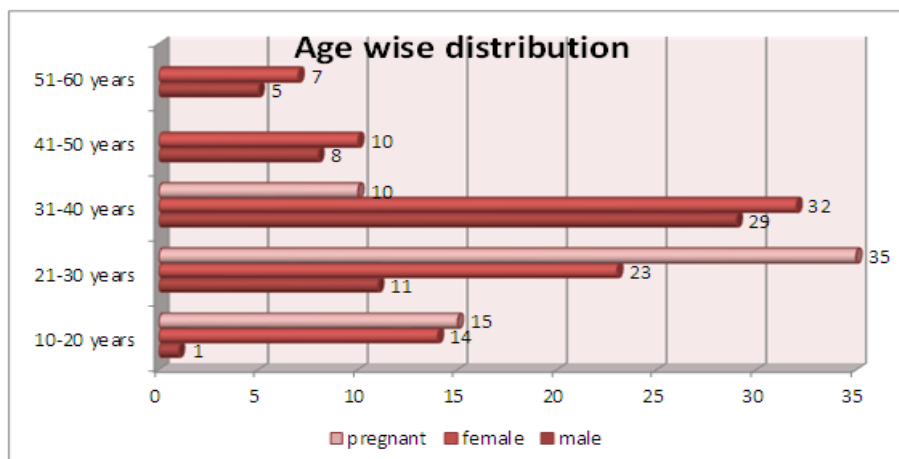
Age wise distribution

Figure 3: Age Wise Distribution Of People Effected Based On Gender.

Table 3: Age wise distribution of people effected based on gender.

Age group	Male	Female	pregnant	Total
10-20	1	14	15	30
21-30	11	23	35	69
31-40	29	32	10	71
41-50	8	10	-	18
51-60	5	7	-	12
Total	54	86	60	200

Distribution according to etiological factor

Table 4 Distribution according to etiological factors.

Etiological factor	Male	Female	pregnant
Mal nutrition	51	71	41
Low economic status	29	26	34
Heavy menstrual bleeding	-	13	-
Pregnancy induced anemia	-	-	60
Others	4	6	-
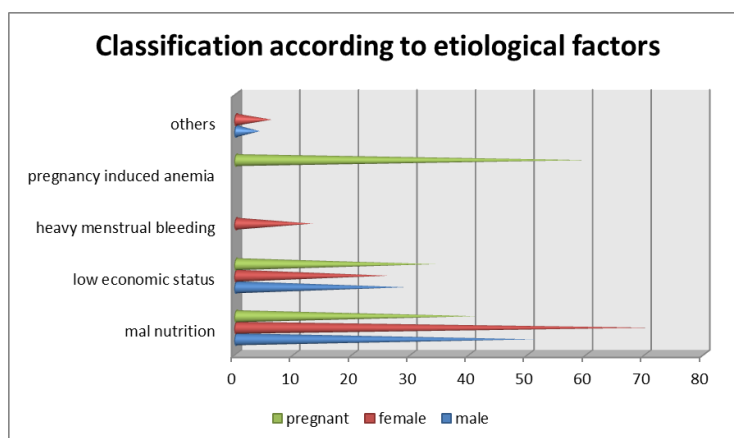
Figure 4: Distribution according to etiological factors.

- The variables studied in this study include age, sex, type of anaemia, etiological factors. By using these variables the prevalence and management patterns among the different gender and categories were analysed.

- The analysis was done by using above parameters. The incidence of anaemia is seen more in females (73%) than males (27%). Most of the reason for the incidence of anaemia is Malnutrition and low economic status.

- Anemia management in affected individuals is done in the pattern of the following ways: Blood transfusion is opted for the patients with less hemoglobin values (mainly opted for the patients with hemoglobin less than 6gms).
- In pregnant patients 19 out of 60 are opted for blood transfusion. In female patients 36 out of 86 are opted for blood transfusion and in male patients 27 out of 54 are opted for blood transfusion. Remaining number of patients who are not opted for blood transfusion oral iron supplementations are provided.

CONCLUSION
The incidence rate of anemia is more prevalent in females than males. Malnutrition and low economic status plays a major role in the prevalence of anemia. Blood transfusion procedure is opted for the patient with low hemoglobin levels (mainly opted for the patients with hemoglobin less than 6gms) and others are provided with oral iron supplements. Due to lack of unawareness people tend to treat this deficiency as general weakness often due to that misconception the condition of the effected patient becomes fatal. Hence it is advised to consume nutrition rich food and get the consultations for the regular health checkups from the physicians periodically.

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