

**PREVALENCE AND RISK FACTORS ASSOCIATED WITH ANAEMIA AMONG PREGNANT WOMEN ATTENDING GOVERNMENT GENERAL HOSPITAL (GGH) MAHABUBNAGAR****Dr. Usha Rani Chadalawada**

Prof & HOD

Dr. Jyothi Veleshala*

Assistant Professor*Corresponding Author

Dr. Arubam Beegita**Dr. Arya TS****Dr. Chandralekha Makam**

ABSTRACT **BACKGROUND:** Anaemia is a significant public health problem in developing countries, particularly in pregnant women. It may complicate pregnancy, sometimes resulting in tragic outcomes. There is a lack of information on the magnitude of anaemia among pregnant women attending Out-patient department of Obstetrics at GGH, Mahabubnagar. **MATERIALS & METHODS:** This is a cross sectional study done for a period of 1 months. Socio-demographic, medical and obstetric history, dietary habits of the study participants were collected using semi-structured questionnaire. Haemoglobin was measured using a haematology analyser and time period between previous pregnancy and present pregnancy history has been monitored. **RESULTS:** Out of the study population nearly 68.2% of pregnant women are anaemic: mild- 37.5%, moderate- 66%, severe: 7.5% .The percentage of non-anaemic pregnant women is only 31.8%. Causes of anaemia in pregnant women are due to lack of awareness on routine check-up of Haemoglobin, deworming and vitamin supplement. **CONCLUSION:** 1/3rd are non-anaemic, 2/3rd are anaemic. Associated risk factor is socio-demographic like poor family income, lack of awareness. Obstetrics factors- time period between previous pregnancy and present pregnancy is very less time. Dietary factors- less protein intake, consumption of iron rich foods is very less.

KEYWORDS : Anaemia, Socio-demographic, Deworming, Obstetric**INTRODUCTION**

Anaemia is a condition in which the number of red blood cells or the haemoglobin concentration within them is lower than normal. Globally, it is estimated that 37% of pregnant women and 30% of women 15-49 years of age are affected by anaemia^[1]. According to the National Family Health Survey-4 and 5, an increase in the prevalence of anaemia from 53% to 57% in all women aged 15-49 years is seen, 50.4% to 52.2% in pregnant women and 53.2% in non-pregnant women had been reported^[2].

The prevalence of anaemia is estimated to be higher in India, which varies from 65% to 75% when compared to all others developing countries the prevalence is 51%, in developed countries is 14%.^[7,8] Anaemia is the second most common cause of maternal deaths in the country and contributing to about 80% of the maternal deaths caused by anaemia in South Asia.^[8,9,11]

Increased requirement of iron during growth and pregnancy and chronic blood loss contribute to higher prevalence in specific groups. In India, anaemia is directly or indirectly responsible for 40% of maternal deaths.^[8] Hence an attempt through this study to estimate the prevalence of anaemia and to determine the risk factors associated with anaemia in pregnant women attending OB&GYN department at GGH, Mahabubnagar.

METHODOLOGY

A cross-sectional study was conducted among pregnant women attending the OBG department OPD at GGH, Mahabubnagar, Telangana, involving 176 participants for the duration of 30 days using convenient sampling method. Pregnant women attending for their 1st antenatal visit and known case of anaemia who is not on treatment were included in the study. Pregnant women who are suffering from haemorrhagic disease and who are using antacids for long time were excluded from the study. IEC approval has taken for this study. Socio-demographic, medical and obstetric history, dietary habits of the study participants were collected using semi-structured questionnaire. Haemoglobin was measured using a haematology analyser.

used for testing significant. $P < 0.05$ was considered as statistically significant.

RESULTS

The distribution of various sociodemographic factors among the participants is present in table 1.

Among the participant of pregnant women age range from 21-25 year of age were more with 92(52.3%), as of educational status illiterate women were more with 132(75%) as compared to women who are literate 44(25%).^[5]

SOCIODEMOGRAPHIC VARIABLE	VALUE
AGE n=176, n (%)	
15-20 year	36(20.5)
21-25 year	92(52.3)
26-30 year	35(19.9)
>30 year	13(7.3)
Educational status n (%)	
Illiterate	132(75)
Literate	44(25)
Per capita income n (%)	
Upper class	60(34)
Upper middle class	88(50)
Middle class	22(12.5)
Lower middle class	4(2.3)
Lower class	2(1.2)
NO. Of family member n (%)	
2	11(6.3)
3	30(17)
4	75(42.6)
5-7	59(33.5)
8 and above	1(0.61)
Awareness of the services provided by the government to a pregnant women n (%)	
Yes	151(85.8)
No	25(14.2)

The data were analysed using MS excel sheet. Chi-square tests were

Service availed by pregnant women provided by the government n (%)	
Yes	127(72.2)
No	49(27.8)

Table 2. Prevalence of Anaemia

Anemia	Number	Percentage
Yes	120	68.2%
No	56	31.8%
Total	176	100

In our study almost more than 2/3rd of pregnant women were anaemic at baseline (120/176; 68.2%). Among 176 pregnant women 120 were anaemic with prevalence of 68.2% and 56 pregnant women were Non-Anaemic with prevalence of 31.8% [4] which is shown in table 2.

Table No.3: RISK FACTORS

Consumption of any deworming tablet in the past 6 month n=176, n (%)	
Yes	10(5.7)
No	160(90.9)
Unknown	6(3.4)
Any consumption of supplement like Vitamin C and B12 in the past 6month n (%)	
Yes	39(22.2)
No	136(77.3)
Unknown	1(0.6)
Duration between previous and present pregnancy n (%)	
Primi	72(40.9)
1 year	65(36.9)
1-2year	25(14.3)
>2 year	14(7.9)
Regularity of menstruation n (%)	
Yes	145(82.4)
No	31(17.6)
Any thyroid disorders n (%)	
Yes	21(11.9)
No	155(88)
Dietary habits of the Respondent n (%)	
Vegetarian	8(4.5)
Non-vegetarian	21(11.9)
Mixed diet	147(83.6)
Frequency of non-veg diet consumption n (%)	
Rarely	35(19.8)
Weekly 1-2time	124(70.5)
Weekly 3-5times	11(6.3)
>5times weekly	1(0.6)
Nil	5(2.8)
Frequency of consumption of fruits and green leafy vegetables n (%)	
Rarely	10(5.7)
Weekly 1-2times	113(64.2)
Weekly 3-5times	49(27.8)
>5times	4(2.3)
Consumption of tea/coffee within 30min before/after food n (%)	
Yes	102(37.9)
No	74(42.1)
Awareness of iron rich food sources n (%)	
Yes	32(18.2)
No	144(81.8)

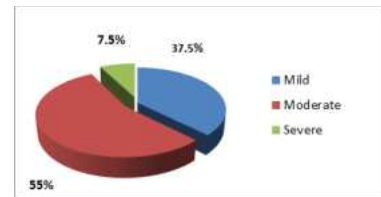
Among 176 pregnant women 160(90.9%) didn't consume any deworming tablet in the past 6 month. Birth spacing was not maintained as needed to be done and these become one of the risk factors among pregnant women causing anaemia.

Table-4. Association between Anaemia and Risk Factors

RISK FACTORS		Prevalence of anaemia		P value
		Yes	No	
Worm infestation in the past 6months	Yes	88	04	0.001
	No	32	52	
Consumption of tea/coffee 30mins before/after food	Yes	89	13	
	No	32	42	
Education status	Illiterate	80	52	
	Literate	40	04	
Awareness about Iron rich foods	Yes	15	17	0.001
	No	109	35	

In association between anaemia and risk factors in our study we found worm infestation in the past 6 month with significant P- value 0.001. Pregnant women who consume tea/coffee within 30mins before/after food statistically significant with P-value of 0.001. Pregnant women who didn't have awareness among iron rich foods have more anaemic compared to pregnant women who are aware about iron rich foods; showing statistically significant with P-value 0.001 which is <0.05. Among pregnant women who are illiterate were found to be more anaemic then pregnant women who are literate with P-value 0.002 which is shown in Table 4

Figure 1. WHO Grading of Anaemia



Out of 176 pregnant women, 37.5 % (45) had mild anaemia, 55% (66) had moderate anaemia, 7.5 % (9) had severe anaemia according to WHO grading of anaemia [3] which is shown in figure 1

DISCUSSION

My study found 68.2% of pregnant women to be anaemic, which is similar to study done by Karl Krupp et al [3]. 7.5% were diagnosed with severe anaemia and significant association were noticed with risk factors like worm infestation, literacy status, and awareness about iron rich foods were similar to study done by Suryanarayana et al [4].

In our study we found out dietary habit in pregnant women who are pure vegetarian were only 8, were as pregnant women who include non-vegetarian in their diet found out to be 21 people and mix diet were seen in 147 pregnant women ,which is contrast to the study conducted by Sushruti Kaushal et al [5] in their study among 172 pregnant women who are anaemic only 57 of them have a diet of non-vegetarian n rest of i.e. 115 pregnant women were having diet of pure vegetarian, and in this study among 156 pregnant women only 38 pregnant women completed their deworming and 118 haven't done or consume any deworming tablet where as in my study out of 176 pregnant women only 10 people consume deworming tablet and the rest i.e. 160 pregnant women didn't consume any deworming tablet.

CONCLUSION

Our study finding suggest that high prevalence of anaemia in pregnant women (68.2%) indicate that anaemia continue to be major public health problem in rural areas of India. Even Iron-Folic Acid supplement is available under Anaemia Mukh Bharat to address this issue, it's important to make sure that primary health care physician to consider and address not only Risk factors base on clinical but also to give main focus on other risk factors which include like socio-demographic factors (socioeconomic status), obstetric variable (birth spacing). Illiteracy, worm infestation, tea/coffee consumption were observed as the major factors contributing to Anaemia in pregnant women.

RECOMMENDATION

It's high time we not only focus during pregnancy time but also to give focus to all six beneficiaries of Anemia Mukh Bharat especially to adolescent girls (10-19 years) by initiating annually hemoglobin checkup in school and making sure available of iron folic acid supplement tablet at primary level.

Support from family members specially spouse who should have

aware of iron rich foods and other factors which support pregnant women by providing counseling section during first antenatal checkup making it compulsory to attend and do the follow up.

ACKNOWLEDGMENT

My sincere heartfelt gratitude to my HOD Dr.Usha Rani.C for her immense support and allowing me to do this study. And also I would like to extend my gratitude to my Assistant Professor Dr.Jyothi Veleshala for her guidance and immense support, helping me out to complete my study on time. And also I would like to thanks my interns 2K18 batch team 4 for helping me out. I also would like to extend my thankful gratitude to all my co-pg.

REFERENCES

1. <https://www.who.int/news-room/fact-sheets/detail/anaemia>.
2. <https://dhsprogram.com/data/availabledatasets.cfm>
3. Krupp K, Placek CD, Wilcox M, Ravi K, Srinivas V, Arun A, Madhivanan P. Financial decision making power is associated with moderate to severe anemia: A prospective cohort study among pregnant women in rural South India. *Midwifery*. 2018 Jun;
4. Suryanarayana R, Chandrappa M, Santhuram AN, Prathima S, Sheela SR. Prospective study on prevalence of anemia of pregnant women and its outcome: A community based study. *J Family Med Prim Care*. 2017 Oct-Dec;
5. Kaushal, Sushruti, et al. "The etiology of anemia among pregnant women in the hill state of Himachal Pradesh in North India: a cross-sectional study." *Cureus* 14.1 (2022).
6. P. Bharati et al.Prevalence of anemia and its determinants among nonpregnant and pregnant women in India *Asia-Pacific Journal of Public Health*(2008)
7. Marahatta R. Study of anaemia in pregnancy and its outcome in Nepal medical college teaching hospital, Kathmandu, Nepal *Nepal Med Coll J*. 2007;
8. Kalaivani K. Prevalence and consequences of anaemia in pregnancy *Indian J Med Res*. 2009;
9. Mbule MA, Byaruhanga YB, Kabahenda M, Lubowa A. Determinants of anaemia among pregnant women in rural Uganda *Rural Remote Health*. 2013;
10. Chowdhury HA, Ahmed KR, Jebunessa F, Akter J, Hossain S, Shahjahan M. Factors associated with maternal anaemia among pregnant women in Dhaka city *BMC Women Health*. 2015;
11. Ahmad N. The prevalence of anaemia and associated factors in rural Indian community *Australas Med J*. 2010;