Propective Study Of Prevalence Of Anaemia And Various Factors Associated With It Among Pregnant Women

Dr. Minu Sharan*, Dr. Mukul Kumar**

*Associate Professor, Obs. & Gynae., Nalanda Medical College, Patna
** Assistant Professor, Dept. of Medicine, Nalanda Medical College, Patna
Corresponding author :
Dr. Mukul Kumar, D-20, Vrindavan Apartment, Malahi Pakri, Kankarbagh Patna 800020

Abstract-
Background – Anaemia is one of the commonest nutritional dificiency disorders occuring in pregnant women in developing courtries. In India, prevalence of iron deficiency anaemia is one of the highest in the world among pregnant women.
Objective – The objective of this study was to determine prevalance of anaemia in pregnant women and the factors associated with it.
Methods – This is a prospective observational study done in the Department of Obstetrics and Gynaecology, Nalanda Medical College, Patna. A total of 400 pregnant women were recruited for this study.
Results – Prevalence of anaemia amongst pregnant women was 63%. Maximum number of women were of the age group 20-24 years. Prevalence was more in illeterate and women with education upto primary school level , manual workers and women on vegetarian diet. Multigravida had more prevalence of anaemia.
Conclusion – A high prevalence of anaemia amongst pregnant women increases maternal and neonatal morbidity and mortality. Primary health care has to be strengthened and public awareness should be increased so that prevention, early diagnosis and treatment of anaemia should be given priority.
Key words: Anaemia in pregnancy, literacy, gravida

I. Introduction

Anaemia in pregnancy is a major health risk problem throughout the world, particularly in developing countries. In India, its prevalence varies from 65% to 75%

Anaemia is second most common cause of maternal mortality in India contributing to about 80% of maternal deaths. Anaemia in pregnancy is also a risk factor for intrauterine growth restriction leading to increased neonatal morbidity and mortality.

II. Aims And Objectives

1. To estimate the prevalence of anaemia in pregnant women coming for ante-natal check up in Nalanda Medical College, Patna.
2. To determine various factors associated with anaemia in pregnancy.

III. Material And Methods

This prospective observational study was conducted in the Department of Obstetrics and Gynaecology, Nalanda Medical College, Patna for a period of 1 year from Jan 2019 to December 2019

A total of 400 pregnant women were recruited in our study after satisfying all inclusion and exclusion criteria. Anaemia was classified as per the World Health Organization (WHO) grading criteria. Haemoglobin concentration of < 11 gm/dl was considered as anaemia. Hb concentration of 10-10.9 gm/dl, 7-9.9 gm/dl and < 7 gm/dl were considered as mild, moderate and severe anaemia respectively.

Haemoglobin level was estimated in all pregnant women. They were counselled about their Hb level and were treated according to their severity of anaemia. They were also counselled about local iron rich foods and importance of regular ante-natal checkups.

INCLUSION CRITERIA
1. Pregnant women of all age groups in all trimesters.

EXCLUSION CRITERIA
1. Patients who had recent blood transfusion.
2. Patients with chronic renal disease.
3. Patients with chronic medical diseases.
4. Patients with haemoglobinopathies.
5. Patients with bleeding disorders.
6. Patients who had Ante-partum haemorhage.

The diagnosis of anaemia was done by standard peripheral blood smear examination and haemoglobin estimation.

IV.   Results

A total of 400 pregnant women were taken for study.

Table I

Distribution of cases according to age

Age group in Years	Number	Percentage (%)
< 20	84	21
20-24	236	59
25-29	76	19
>30	4	1

Majority (59%) of the patients belonged to the age group of 20-24 years, where as least (1%) belonged to age group > 30 years.

Table II

Distribution of severity to anaemia according to age

Age group in years	Mild		Moderate		Severe		Total	
	No.	%	No.	%	No.	%	No.	%
<20	25	10	38	15	5	2	68	27
20-24	42	16.8	90	35.8	11	4.1	143	56.7
25-29	12	4.8	25	10	3	1.1	40	15.9
>30	0	0	1	0.4	0	0	1	0.4

Maximum no. of cases suffering from anaemia were of the age group 20-24 years Of all the cases 31.6% had mild, 61.2% had moderate and 7.2 had severe anamenia.

Table III

Distribution of cases according to level of education

Education	Mild		Moderate		Severe		Total	
	No.	%	No.	%	No.	%	No.	%
Illiterate	26	10.3	17	6.7	9	3.6	52	20.6
Primary School	23	9.1	73	29	7	2.8	103	40.9
High School	19	7.5	54	21.5	3	1.2	76	30.2
Graduate/PG	11	4.4	10	3.7	0	0	21	8.3

Prevalence of anaemia was more in illeterate and education upto primary school group compared to graduates and post graduates.

Table IV

Distribution of cases according to occupation

Occupation	Mild		Moderate		Severe		Total	
	No.	%	No.	%	No.	%	No.	%
Housewife/ Manual workers	47	18.7	133	52.8	18	7.1	198	78.6
Employed/Women	32	12.7	21	8.3	1	0.4	54	21.4

House wives and manual labours suffered more (78.6%) from anaemia compared to employed women (21.4%).

Table V

Distribution of cases according to parity

Parity	Mild		Moderate		Severe		Total	
	No.	%	No.	%	No.	%	No.	%
Primi	43	17.1	27	10.7	2	0.8	72	28.6

| Gravida 2 | 25 | 9.9 | 37 | 14.7 | 1 | 0.4 | 63 | 25 |
| Gravida >2 | 11 | 4.4 | 90 | 35.7 | 16 | 6.3 | 117 | 46.4 |

Prevalence of anaemia was more in gravida 3 or more (46.4%) as compared to primi (28.6%) and second gravida (25%).

Table VI
Distribution of cases according to diet

Diet	Mild		Moderate		Severe		Total	
	No.	%	No.	%	No.	%	No.	%
Veg	30	11.9	112	44.4	7	2.8	149	59.1
Mixed	49	19.4	42	16.7	12	4.8	103	40.9

40.9 % women on mixed diet had anaemia as compared to women on vegetarian diet (59.1%).

V.   Discussion

A total of 400 pregnant women were recruited for this study after satisfying all inclusion and exclusion criteria. Two hundred and fifty two (63%) patients had mild (31.6%), moderate (61.2%) and severe (7.2%) anaemia. WHO reports are similar where 56% of all pregnant women in developing countries suffer from anaemia. Indian Council of Medical Research surveys also showed that 70% of pregnant women were anaemic.

Severe anaemia was present in about 7% of all pregnant women. In a study by Bhargavi Vemulapalli et al, 40.97% had a moderate and 6.28% of the population had severe anaemia.

Majority of the women suffering from anaemia were of the age group of 20-24 years. Among education category, majority of the anaemic women were either illeterate or educated upto primary school level. Similar study was done by Pushpa et al. showed that proportion of pregnant women suffering from anaemia were 96.4% , 94.8%, 92.1% and 91.5% among illiterates, those educated upto primary, middle school and high school respectively.

Among occupation category, maximum number of anaemic women were either housewives or manual labour.

VI.   Conclusion

High prevalence of anaemia among pregnant women indicates that anaemia in pregnancy continues to be a major health problem in this part of our country. Anaemia in pregnancy increases maternal and neonatal health problems. Gravida status, literacy, diet were important factors associated with anaemia.

Health education on reproductive health, limiting family size, balanced diet, early diagnosis, regular supply of IFA tablets to adolescent girls and pregnant women till 12 weeks post partum will go a long way in treating a preventable condition and achieving the WHO 2025 global nutrition target of fifty percent reduction of anaemia in reproductive age group.

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