

Original Research Article

Prevalence and outcome of anaemia among pregnant women attending tertiary care hospital in Visakhapatnam

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ABSTRACT

Background: Anaemia in pregnancy is now considered as a major public health problem, caused by iron deficiency. WHO has estimated that prevalence of anaemia in developed and developing countries in pregnant women is 14% in developed countries and 51 percent in developing countries and 65-75% in India. Various programmes regarding anaemia prophylaxis and maternal health have been implemented but still the prevalence of anaemia related complications among pregnant women continues to be high. Hence the present study was conducted to study the prevalence and pregnancy outcome as a result of anaemia in a tertiary care center in Visakhapatnam.

Methods: A cross sectional descriptive study was carried out from June 2016 to August 2016 in the Department of Obstetrics and Gynecology among postnatal women in King George hospital, Visakhapatnam. A semi-structured questionnaire was prepared and information regarding age, socioeconomic status, parity, gestational age interval between pregnancies and outcome and complication of pregnancy were collected.

Results: Mean age of study population is 22.4 years. Out of 100 women involved in the study 65 are from urban areas 29 from rural areas and 6 from tribal areas. Majority of the study population 66% were having HB% between 8-11% i.e. mild anaemia. When Outcome of pregnancy was seen in relation to anaemia majority of the women had live births (90%) followed by 7% IUDs and 2% still births.

Conclusions: Majority of the women are in the age group of 20-24 years. Socioeconomic status is directly related to anaemic status of the women. Majority of the women had complication of puerperal sepsis.

Keywords: Anaemia, Pregnancy, Complications

INTRODUCTION

Anaemia in pregnancy is now considered as a major public health problem, caused by iron deficiency. WHO has estimated that prevalence of anaemia in developed and developing countries in pregnant women is 14% and 51% respectively and it is 65-75% in India.¹ Prevalence of anaemia in all the age groups is higher in India as compared to other developing countries. Prevalence of anaemia in South Asian countries is highest in the world.

WHO estimates that even among the South Asian countries, India has the highest prevalence of anaemia. Half of the global maternal deaths due to anaemia is in South Asian countries. India contributes to about 80% of the maternal deaths due to anaemia in South Asian countries.

NFHS- 4 data shows that the prevalence of anaemia among pregnant women in age group of 15-49 years is 60.2%.² In India, the prevalence of anaemia is high

because of (i) low dietary intake, poor iron (less than 20mg/day) and folic acid intake (less than 70mg/day); (ii) poor bioavailability of iron (3-4% only) in phytate and fiber-rich Indian diet and (iii) chronic blood loss due to infection such as malaria and hookworm infestations.³ Various programmes regarding anaemia prophylaxis and maternal health have been implemented but still the prevalence of anaemia related complications among pregnant women continues to be high.³ Hence the present study was conducted to study the prevalence and pregnancy outcome as a result of anaemia has been taken up in a tertiary care center in Visakhapatnam.

METHODS

A cross-sectional descriptive study was carried out among postnatal women in the Department of Obstetrics and Gynecology, King George hospital, Visakhapatnam. The study was conducted from June 2016 to August 2016. The study population includes postnatal women in the Department of Obstetrics and Gynecology, King George hospital, Visakhapatnam. All the postnatal women were included in the study until the desired sample size of 100 was obtained. A semi-structured questionnaire was prepared and information regarding age, socioeconomic status, parity, gestational age interval between pregnancies and outcome and complication of pregnancy were collected. Readings of hemoglobin were taken from the case sheets of the antenatal women who

were admitted in the Department of Obstetrics and Gynecology. Socioeconomic classification was done according to Modified Kuppaswamy classification. Anaemia was classified according to WHO criteria HB% <6.5%, 6.5-8% and 8-11% were considered as severe, moderate and mild anaemia respectively.⁴ Data was analyzed by using Microsoft excel.

RESULTS

A total of 100 postnatal women have been included in the study. The range of study population varied from 19-35 years of age. Mean age of study population is 22.4 years. Out of 100 women involved in the study 65 are from urban areas 29 from rural areas and 6 from tribal areas.

Table 1: Distribution of anaemia among pregnant women.

Hemoglobin (%)	No of Women
<6.5	5
6.5-8	10
8-11	66
>11	19
Total	100

As shown in Table 1, majority of the study population 66% were having HB% between 8-11% i.e. mild anaemia.

Table 2: Distribution of anaemia according to various indices.

Aneamia		<6.5%	6.5-8%	8-10%	>10%
Age	≤19	2	4	9	2
	20-24	3	4	41	13
	25-29	0	2	10	5
	30-34	0	1	3	0
	≥35	0	0	1	0
Gravida	1	4	5	31	9
	2	1	4	19	8
	3	0	2	12	1
	4	0	1	3	0
Spacing	<2 years	1	4	44	6
	>2 years	4	6	23	11
BMI	<18.5	5	4	17	4
	18.5-24.99	0	6	33	12
	25-29.99	0	0	13	3
	30-34.99	0	0	2	1
	35-39.99	0	0	0	0
Income	26-29	0	0	0	0
	16-25	2	4	19	7
	11-15	2	5	31	4
	5-10	1	3	16	6
	<5	0	0	0	0
Pregnancy outcome	Live births	4	12	58	16
	Stillbirths	0	0	1	1
	Deaths	0	0	6	1

According to Table 2, majority of women are in the age group of 20-24 years are having mild anaemia. Severe anaemia is seen in 2% women in 19 years of age 3%, women in the age group of 20-24 years. 12% of women with mild anaemia are in gravida 3.5% of women with moderate anaemia are primigravida. Spacing was assessed as duration between children as more than 2 years and less than 2 years. Majority of the women (44%) are having mild anaemia when spacing was more than 2 years. When BMI was assessed 33% of women with mild anemia are having normal BMI followed by 17% who are underweight. Obesity was seen in 13% of women. When Outcome of pregnancy was seen in relation to anaemia majority of the women had live births (90%) followed by 7% IUDs and 2% still births. Socioeconomic status is directly related to anaemia in pregnancy. In the present study 58% of women belong to low socioeconomic status are anaemic as compared to 42% of women who are having normal haemoglobin levels.

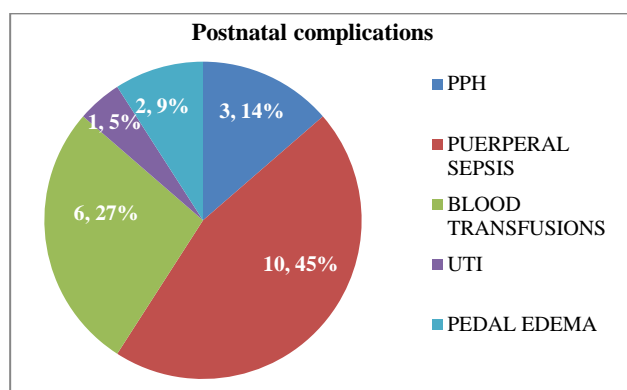


Figure 1: Distribution of study subjects according to the postnatal complications.

As shown in Figure 1 postnatal complications were seen in 22% of women in the present study. Out of them postpartum hemorrhage was seen in 14% of the women. Puerperal sepsis was observed in 45% of the women. Blood transfusions were required for 27% women and pedal edema was seen in 9% of women.

DISCUSSION

The present study was conducted among 100 women attending tertiary care hospital. In our study 81% of women are having haemoglobin less than 11% and only 19% of women are having more than 11% of haemoglobin. Among the women majority were in the age group of 20-24 years. Our results were similar to the study conducted by Ivan et al.¹ Our study was also comparable to the study conducted by Upadhyay, Bulusu, Shah in Ahmedabad.⁵

Socioeconomic status also contributes to maternal anaemia. In the present study 58% of women in low

socioeconomic group are anaemic. Similar results were found in a study conducted by Judith et al in Udipi district where 54.2% of low socioeconomic group were anaemic.⁶ A cross sectional study in New Delhi has revealed that there was a trend of decreasing severity of anaemia with higher per-capita income.⁷ Women with high parity 3 and 4 are nearly 100% anaemic. As parity increases the prevalence of anaemia increases. Mean spacing between births has an impact on haemoglobin status of women. In the present study spacing between pregnancies less than 2 yrs was 54% and more than 2 years was 46%. Our study was comparable to a study conducted by Upadhyay, Bulusu, Shah in Ahmedabad where spacing between pregnancy among women was less than 2 years the prevalence of anaemia was found to be 89% whereas in spacing more than 2 years the prevalence was 75%.⁵

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- Ivan EA, Mangaiarkkarasi A. Evaluation of anaemia in booked Antenatal mothers during the last trimester. J Clin Diagn Res. 2013;7(11):2487-90.
- NFHS-4 2015-16 AP fact sheet www.mohfw.org
- Kalaivani K. Prevalence and consequences of Anaemia in pregnancy. Indian J Med Res. 2009;130:627-33.
- WHO. Haemoglobin Concentrations for the Diagnosis of Anaemia and Assessment of Severity. Vitamin and Mineral Nutrition Information System. Geneva: World Health Organization, 2011.
- Upadhyay C, Bulusu R, Shah N. A prospective study on prevalence and management of anaemia in pregnancy with perinatal outcome. J Evol Med Dental Sci. 2013;2(35):6664-72.
- Judith AN, Bhaduri A, Bhat HV. Prevalence of anaemia among pregnant women: a community-based study in Udipi district. Health Popul Perspect Issues. 2008;31(1):31-40.
- Gautam VP, Bansal Y, Taneja DK, Renuka S. Prevalence of anaemia amongst pregnant women and its socio-demographic associates in rural area of Delhi. Indian J Community Med. 2002;27:157-60.

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