Research Article

Prevalence of Anemia among Pregnant Mother Admitted for Delivery at Distinct Hospital Ambala, Haryana: An Observational Study

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ABSTRACT

Anemia is one of nutritional insufficiency disorder and affecting developing and developed country both. In developing country around 56% of pregnant mothers are anemic. Anemia is second most cause for the maternal mortality in India. The main objective of this study was to understand the health profile by assessing the level of hemoglobin of pregnant women at the completion of their pregnancy period and its associated socio demographic factors among the mothers at term on the basis of Hb level. The study was conducted on pregnant mother who were admitted to civil hospital Ambala Haryana. This study was an observational study. Mother's hospital records were assessed and the Hb value of mothers was noted. The study was conducted in December, 2016 month to January, 2017. The prevalence of anemia and its associated factors were studied. There are many factors responsible for the incidence of anemia. Anemia was classified according to WHO classification. Out of 286 samples, the prevalence of anemia was 75% among pregnant mothers who were admitted for delivery in the hospital. 51.7% had mild anemia, 29% had moderate anemia, 4.5% had severe anemia and 2.1 % had extremely severe anemia, according to who classification. There is significant high prevalence of anemia among pregnant mothers. Anemia is one of public health problem. Awareness towards the iron rich diet and supplementation, nutritional counseling and spacing between birth children are recommended to prevent the anemia among women, more emphasis on those having huge family size and lower socioeconomic status.

Keywords: Anemia, pregnancy at term, Nutrition, prevalence.

INTRODUCTION

Pregnancy is the time when children develop inside a woman womb. A multiple pregnancy leads to more than one offspring called twins. Pregnancy is exciting and joyous time for the women and responsible to be construct the most excellent support to the wellbeing for the future child. The fetus depends completely on mothers to fulfill the growing needs. So the pregnant women need healthy and nutritious diet to keep her baby healthy[1]. The deficiency of nutrition and another factor responsible for creating many health problems among antenatal mothers. In India, one of the major public health problems among pregnant mothers is Anemia.[2] In developing country 47% pregnant women's and in non pregnant women shows the data of 30% are anemic.[3] Anemia throughout the pregnancy is a major cause for the mortality and morbidity for both mother as well fetus. Anemia during antenatal periods is measured extremely severe when hemoglobin level less than ≤6.5g/dL, severe in range between 6.5-7.9g/dL, moderate in between 8.0-9.4g/dL and mild comes under 9.5-10.9g/dL and normal concentration is ≥11g/dL.[4,5,6]. Hb level ≤6.5g/dL in pregnant women considered as medical emergency as it lead to the risk of maternal death and congestive heart.[7]

Low hemoglobin levels are related with high risk of low birth weight of children, preterm delivery, intrauterine growth retardation and decreased APGAR score [8].

Some genetic, infectious health problem, social-economic reasons are also contributing factors to develop the anemia among pregnant mothers[9]. The common contributing factors are vitamin B_{12}, folic acid and iron deficiency. Iron deficiency is estimated the top contributes to the overall burden of disease. [10]

In Africa, the prevalence rate of anemia among antenatal mothers range from 35% to 72% while in Asia 37% to 75%. It can be expected that 2-7% of antenatal women's have hemoglobin value ≤6.5g/dL. According to the World Bank, anemia is eighth vital cause for the disease among the adolescent girls and also in women.[11] In India, 80% of antenatal mothers is affected with iron deficiency anemia.[12] Anemia is one of the most important causes for the morbidity and mortality in most part of the world. In pregnancy anemia affect the health of baby as well as mothers, approximately 20% of maternal mortality rate in Africa have been contributed to anemia. [13]

MATERIALS AND METHODS

This observational study was conducted in the District hospital Ambala, Haryana. The main aim was to identify the cases of anemia who were admitted in the hospital for the delivery. Data was collected from 286 pregnant mothers. The mothers who were critically in poor health during the data collection were excluded. The tools which were used for this study were socio-demographic Performa. After administration of the tool, the Hb were noted from the participant's hospital file who will came for the delivery. The reliability of tool was checked by

split half method. Data analysis was done by using both descriptive and inferential statistics. Data were analyzed by using SPSS version.

RESULTS

Table 1 shows, that the majority median age of women participants was 127 within the range of 20-24.Pertaining to educational status, 190 women achieved secondary school, high prevalence anemia among housewives 151 of women were having mix dietary pattern. In aspects of socio-economic status majority of women 133 were having middle economic status. Most of mothers belong to low and middle class families. According to obstetrical history 102 belongs to secondary gravida those were majorly affected.

Table 1: Demographic Characteristics of the Participants

SR. NO.	CHARACTERISTICS VARIABLES	FREQUENCY	%	CASES OF ANEMIA
1	AGE			
	17-19	07	2.4	6
	20-24	127	44.4	100
	25-29	101	35.3	92
	30 & above	51	17.8	44
2	EDUCATION			
	Illiterate	31	10.8	24
	Primary	43	15.0	39
	secondary	190	66.4	164
	Other	22	7.7	19
3	OCCUPATION			
	Housewife	286	100.0	
	Others	0	0.0	
4	DIET			
	Vegetarian	110	38.5	94
	Non-vegetarian	3	1.0	3
	Mix	173	60.5	151
5	Socio-economic status			
	Low (1-17)	74	25.8	153
	Middle (18-34)	133	46.5	113
	High (35-52)	79	42.4	20
6	GRAVIDA			
	G1	99	34.6	82
	G2	102	35.7	87
	G3	62	21.7	58
	G4	23	8.0	22

Anemia was classified according to WHO classification. Table 2, shows that out of 286 pregnant mothers, 250 (87.4%) mothers were found anemic including all the categories of anemia. In addition to this, 148 mothers had mild anemia, 83 had moderate, 13 pregnant women suffered with moderate anemia and 6 mothers come under the extremely severe anemia and rest of the 36 (12.5%) mothers were having normal status.(as shown in figure 1).

Table 2: Prevalence of Anemia and its Severity of Cases

SNO.	DEGREE OF ANEMIA	RANGE	CASES	%	TOTAL CASES OF ANEMIA
1	Normal	≥11	36	12.6	36 (12.5%)
2	Mild	9.5-10.9	148	51.7	250 (87.4%)
3	Moderate	8.0-9.4	83	29	

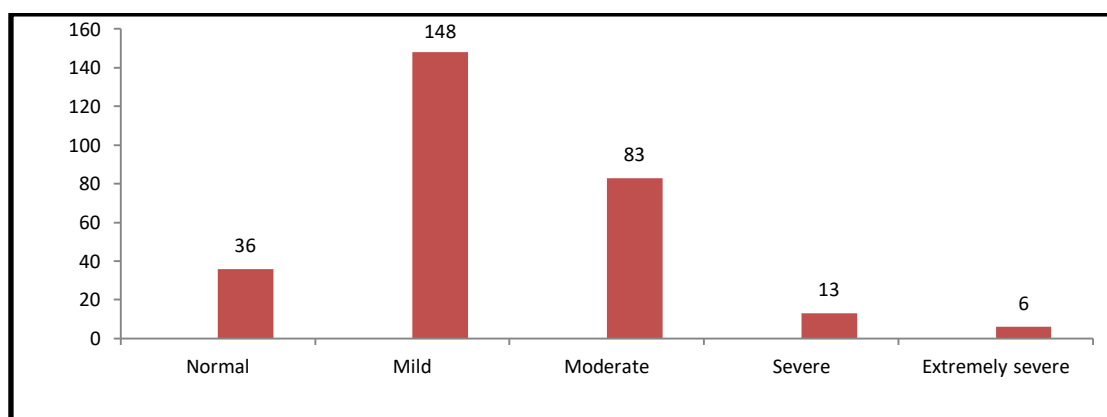| 4 | Severe | 6.5-7.9 | 13 | 4.5 | |
| 5 | Extremely severe | ≤6.5 | 06 | 2.1 | |

Figure 1: Bar graph showing prevalence of anemia

Table 3: Chi square value showing the association of prevalence of anemia among pregnant women with selected socio demographic variable.

Sr.No.	Variables	Anemia		Chi value	df	p value
		No	Yes			
1	AGE					
	15-19	0	7	2.919[NS]	3	0.404
	20-24	20	107			
	25-29	10	92			
	30 & above	6	45			
2	EDUCATION					
	Illiterate	6	25	2.32[NS]	3	0.69
	Primary	3	40			
	secondary	24	166			
	Above	3	20			
3	OCCUPATION					
	Housewife	37	249	0.289[NS]	2	0.866
	Others	0	0			
4	DIET					
	Vegetarian	15	96	0.551[NS]	2	0.759
	Non-vegetarian	0	3			
	Mix	21	152			
5	GRAVIDA					
	G1	17	82	5.542[NS]	3	0.136
	G2	14	89			
	G3	4	58			
	G4	1	22			

DISCUSSION AND CONCLUSION

Anemia is commenly occur health problem that occur among the pregnant women with high incidence of morbidity and mortality rate. The current study was conduceted to assess the prevelence rate of anemia in district hospital Ambala, Haryana.

The majority of praganant mother belong the age group of 20-24 years. About 102 mothers were second gravida and 99 were primigravida. All participants were house wife. 60.5% of mothers prefer mix diet while 38.5 % mothers like vegetraian diet. Most of pregnant mother 133, belongs to middle class Family.

A study conduced on demographic variable in Kerno revel that most of pregnant mother belong to age group of 15-45years and 47.7% of mothers had tertiary status of education.[14] WHO report repersent that 56% of mothers living in developing countries are anemic.[15] Table 2 shows that, majority of mothers having moderate anemia Another study was conducted in Telanga , India shows the prevelance of anemia in pregnant women was 58.36%,where as moderate are 36.8, severe cases 6.9% and mild 28.0%, out of 269 mothers.[16] Similar study reveal that pragnant mothers suffer more with anemia 92.5%, 91.5%, 94.8% and 96.4% with lower educational ststus women.[17] In the present study the prevenlice of anemia is found higher, similar study was conducted in Northeswst Ethopia(16.6%) and Addid Ababa (21.3%).[18-20]

Anemia is more prevelant among the praganant mothers. Early diagnosis and managemt should be copmlsory to reduce the risk in the latter stage. More research study can be conducted to find out the main cause and need of antenatal mothers.Behaviour modification strategies shold be implmented among the adolesent and pragnent mothers. Primary prevention should be implemented, to identify the cases and associated risk factors of anemia. Health mdification and life style measure should be implmented through the health education programme in community. The distribution of iron and folic acid supplement along with anganwari worker and community nurse. The pragnant mother have no iron supplement in the current pragnancy, having two times more risk to develop anemia in the nxt pregnancy. [21, 22]

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