

A Prospective Study on Prevalence of Anemia in Pregnant Women

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Abstract

Background: India being one of the developing country and wide importance have been given to take care of maternal health but still anaemia plays a major public health problem and also one of the most commonest nutritional diseases in the world. Anemia being more prevalent in women of reproductive age and more so rampant during pregnancy. Anemia also increases maternal morbidity and mortality. The requirement of nutrients increases during pregnancy and many causes like lack of proper education, poverty, early marriage, teenage pregnancy and poor nutritional supplementation increases the risk of anemia in pregnancy.

Methods: This prospective observational study was conducted by the Department of OBG at Dr Patnam Mahender Reddy Institute of Medical Sciences, Chevella, Telangana from November 2018 to October 2019. A total of 120 patients were included in the study on the basis of inclusion criteria.

Results: The maximum cases 65 (54.2%) were in the age of 21-25 yrs followed by 43 (35.9%) in the age group 26-30 years. The mean age of the patients was 24.24 (SD 12.66) years. The maximum incidence of anemia were present in multigravida 78 cases (65%) when compared to primi 42 cases (35%). The majority of the cases presented with moderate anemia 62 cases (51.7%), 38 cases (31.7%) presented with mild anemia, 20 cases (16.6%) had severe anemia. Severity of anemia was classified as ICMR classification.

Keywords: Anemia; Pregnancy; Nutritional.

Introduction

India being one of the developing country and wide

importance have been given to take care of maternal health but still anaemia plays a major public health problem and also one of the most commonest nutritional diseases in the world. Anemia being more prevalent in women of reproductive age and more so rampant during pregnancy. Anemia also increases maternal morbidity and mortality. The requirement of nutrients increases during pregnancy and many causes like lack of proper education, poverty, early marriage, teenage pregnancy and poor nutritional supplementation increases the risk of anemia in pregnancy. Incidence of anemia during pregnancy in India ranges between 65-75%.¹ Anaemia in pregnancy can in turn lead to maternal and even foetal complications during pregnancy. Early diagnosis and treatment of the underlying cause can be very helpful in preventing the complications. Diagnosis of anaemia is usually made when the haemoglobin concentration is less than 11 gm/dl or the haematocrit is less than 32%. So as anemia can easily be diagnosed and prevented, this study was carried out to determine the commonest presentation and also look out for the maternal outcome of all pregnant women with anaemia.

Materials and Methods

This prospective observational study was conducted by the Department of OBG at Dr Patnam Mahender Reddy Institute of Medical Sciences, Chevella, Telangana from November 2018 to October 2019. A total of 120 patients were included in the study on the basis of inclusion criteria.

Inclusion Criteria

1. Pregnant woman in third trimester and singleton pregnancy presenting with haemoglobin of less than 11gm% .

Exclusion Criteria

1. Pregnant women whose haemoglobin was more than 11gm/dl.
2. Pregnant women with first and second trimester pregnancy

Procedure

The detailed history and proper clinical findings were entered in a proforma case sheet. The clinical examination was done and necessary investigations like haemoglobin estimation, peripheral smear and obstetric scan were carried out to establish the diagnosis. Anemia was classified according to Indian council of Medical Research criteria (ICMR)-Mild anemia-10-10.9gm/dl ,Moderate anemia-7.1-10gm/dl and Severe anemia- <7 gm/dl.

Statistical Analysis

The data was analyzed using SPSS software version16. Descriptive statistics like mean and percentages were used to interpret the results.

Results

A total of 120 cases were included in this study at our hospital during the period of November 2018 to October 2019.

Table 1: Age Wise Distribution of Study Subjects.

Age (Yrs)	Cases	Percentage
<20 yrs	5	4.2
21-25yrs	65	54.2
26-30yrs	43	35.9
31-35yrs	7	5.7
Total	120	100.0

Out of 120 subjects enrolled into the study, maximum cases 65(54.2%) were in the age of 21-25 yrs followed by 43(35.9%) in the age group 26-30years. The mean age of the patients was 24.24 (SD12.66) years .

Table 2: Distribution Of Cases Based on Parity.

Parity	Cases	Percentage
Primigravida	42	35
Multigravida	78	65
Total	120	100

In our study, the maximum incidence of anemia were present in multigravida 78cases (65%) when compared to primigravida 42 cases (35%).

Table 3: Distribution of Cases According to Symptoms.

Symptoms	Cases	Percentage
Fatiguability	52	43.3
Pedal Edema	42	35
Dyspnea/Palpitation	19	15.8
Others	2	1.7
Asymptomatic	5	4.2

In our study ,the majority of the cases presented with fatiguability 52cases (43.3%) and pedal oedema 42cases(35%),dyspnoea/palpitation were seen in 19 cases(15.8%) and 5(4.2%) cases presented with no symptoms.

Table 4: Distribution of Cases According to Severity of Anemia.

Anemia	Cases	Percentage
Mild	38	31.7
Moderate	62	51.7
Severe	20	16.6
Total	120	100

The majority of the cases in our study presented with moderate anemia 62 cases (51.7%), 38 cases (31.7%)presented with mild anemia, 20 cases (16.6%) had severe anemia. Severity of anemia was classified as ICMR classification.

Table 5: Distribution of Cases According to Peripheral Smear Study.

Peripheral Smear	Cases	Percentage
Normocytic normochromic	24	20
Microcytic hypochromic	84	66.7
Dimorphic	12	13.3
Total	120	100

Peripheral smear in majority of the cases 84 cases showed microcytic hypochromic anemia (66.7%), dimorphic anemia were seen in 12 cases(13.3%) where as normocytic normochromic anemia were seen in 24 cases(20%)

Table 6: Distribution Of Cases According To Maternal Complications.

Maternal Complications	Cases	Percentage
Absent	98	81.7
Present	22	18.3
Total	120	100

Table 7: Maternal complications were absent in 98 cases (81.7%) where as 22 cases (18.3%) showed complications.

Maternal Complications	Cases	Percentage
Postpartum Haemorrhage	8	36.4
Sepsis	2	9.1
Postpartum Fever	12	54.5
Total	22	100

Maternal complication were seen in 22 cases, of which postpartum fever was most commonly seen in 12 cases (54.5%) followed by Postpartum haemorrhage in 8 cases (36.4%).

Discussion

In India, anaemia is the second most common cause of maternal death, accounting for 20% of total maternal deaths.² The prevalence of anaemia ranges from 33% to 89% among pregnant women and is more than 60% among adolescent girls with wide variations in different regions of the country.³ The maximum cases (54.2%) were in the age of 21-25 yrs followed (35.9%) in the age group 26-30 years. The mean age of the patients was 24.24 (SD12.66) years. The results were in accordance with Rajamouli J et al⁴ who noted that 59.1% of cases belonged to the same age group where as our study was in contrast to the study done by Ahmad N⁵ who noted that the maximum cases were in the age group <20 yrs (45.8%). The maximum incidence of anemia were present in multigravida (65%) which was consistent with the study done by Awasthi A et al⁶ who noted 65% of the cases to be multigravidae. The majority of the cases presented with fatiguability (43.3%) and pedal oedema (35%) which were consistent with the study done by Maka S et al⁷ who noted fatiguability as the most common presentation (77%).

The majority of the cases presented with moderate anemia (51.7%) and only (16.6%) had severe anemia which was in accordance with the study done by Vemulapalli B et al⁸ who noted 40.97% of cases with moderate anemia. Peripheral smear showed microcytic hypochromic anemia (66.7%) as the most commonest presentation which was consistent with the study done by Awasthi A et al⁶ and Maka S et al⁷. Maternal complication were present in (18.3%) of cases, of which postpartum fever were seen in (54.5%) cases, followed by postpartum haemorrhage in (36.4%) cases which were consistent with the study done by Maka S et al⁷.

Conclusion

From this study, we can conclude that anemia in pregnant women is rampant although several programmes have been initiated by the state and central government. The present study shows that there is a need for higher intervention to be carried out at the ground level to reduce the prevalence of anemia which in turn can reduce the maternal morbidity and mortality. Better awareness and educating females about the problems have to be undertaken.

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

References

1. De Mayer EM, Tegman A. Prevalance of anemia in the World. World Health Organ Qlty. 1998;38:302- 16.
2. Govt. of India. Health information of India, 1995, DGHS, Nirmal Bhawan, New Delhi.
3. Toteja GS, Singh P, Dhillon BS, Saxena BN, et al. Prevalence of anemia among pregnant women and adolescent girls in 16 districts of India. Food Nutr Bull. 2006;27(4):311-5.
4. Rajamouli J, Ravinder A, SCK Reddy, Sujatha Pambi. Study on prevalence of anemia among pregnant women attending antenatal clinic at rural health training centre (RHTC) and chalmeda anand rao institute of medical sciences teaching hospital, karimnagar, Telangana, India. International Journal of Contemporary Medical Research .2016;3(8):2388-2391.
5. Ahmad N, Kalakoti P, Bano R, Syed MMA. The prevalence of anaemia and associated factors in pregnant women in a rural Indian community. AMJ. 2010;3(5):276-280.
6. Awasthi A, Thakur R, Dave A. Maternal and perinatal outcome in cases of Moderate and severe anemia. J Obstet Gynecol India. 2001;51(6):62- 65.
7. Maka S, Tondare SB, Tondare MB. Study of impact of anemia on pregnancy. Int J Reprod Contracept Obstet Gynecol. 2017;6:4847-50.
8. Vemulapalli B, Rao KK. Prevalence of anaemia among pregnant women of rural community in Vizianagaram, North Coastal Andhra Pradesh, India. Asian J Med Sci. 2013;5:21-5.