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Research Article

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Retrospective study on prevalence of anaemia among pregnant women at booking in a health care centre in Yadwad, Dharwad, Karnataka, India

Prathvim Raj BU¹*, Vijayalaxmi Mangasuli²

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*Correspondence: Dr. Prathvim Raj BU,

E-mail: prathvim@rediffmail.com

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ABSTRACT

Background: Anaemia in pregnancy is one of the major risk among them. This is associated with abortions, premature births, postpartum haemorrhage and low birth weight. Thus anaemia is considered as one of the most frequent complications of pregnancy and there is need of early detection.

Methods: Retrospective record based study conducted at Rural Health Training Centre, Yadwad, Dharwad for a period of one month from October to November. Data regarding pregnancy are collected from September 2014 to October 2015 by referring the records maintained at RHTC. Data was analysed using SPSS.

Results: A total of 142 pregnant women were registered for ANC care during this one year period. Majority (76.1%) belonged to the age group of 20-25 years and 92.1 were Hindu by religion. 54.9% of pregnant women were registered during first trimester followed by 23.2% who had registered during second trimester and rest at third trimester. Prevalence of anaemia in the present study was found to be 75.2% with 121 cases among which 101 cases were mild form, 19 cases were moderate form and only 1 case was of severe form with Haemoglobin level below 7g/dl. The study didn't show any significant association between anaemia and age of present pregnancy, trimester of booking/registration, birth interval from last pregnancy and parity when analysed using chi square test with yates correction at significance at p<0.05.

Conclusions: There is high prevalence (85.2%) of anemia among pregnant women. It was also noted that 45.1% of the pregnant women registered after first trimester of pregnancy. Hence leading to late acceptance of antenatal care and iron and folic acid supplementation which is given to reduce the cases of anemia in pregnancy.

Keywords: Antenatal care, Parity, Birth interval, Registration

INTRODUCTION

Pregnancy for most women is a time of great happiness and fulfillment. However during pregnancy both the women and her developing child face various health risks. Anemia in pregnancy is one of the major risk among them.

Anemia in pregnancy is defined by WHO as a condition where Hemoglobin concentration in blood is below

11g/dl and is said to be mild when hemoglobin level is between 10 to10.9g/dl; moderate when it is between 7 to 7.9g/dl and severe when it is less than 7g/dl.¹

Surveys in different parts of India indicate that about 50-60% of women belonging to low socio-economic group are anemic in the last trimester of pregnancy which increases the risk of maternal and fetal mortality with it causing about 19% of maternal mortality.² Studies have also shown an increased association of anemia with

¹Assistant Professor, Department of Community Medicine, Mount Zion Medical College, Nedumon, Chayalode, Adoor, Kerala, India

²Department of Community Medicine, SDM College of Medical Sciences and Hospital, Dharwad, Karnataka, India

conditions such as abortions, premature births, post-partum hemorrhage (PPH) and low birth weight (LBW).

Thus anemia is considered as one of the most frequent complications of pregnancy and visit to health care facilities for early detection of these cases. Hence present study was undertaken with an objective of finding the prevalence of anemia and to study the factors associated with anaemia among pregnant women at registration visiting RHTC of SDMCMSH, Dharwad.

METHODS

Study setting

Study was conducted at Rural Health Training Centre, Department of Community Medicine, SDMCMSH, Dharwad, Karnataka, India.

Study period

Data regarding pregnancy collected and analyzed from September 2014- September 2015 over 15 days period from October 20th to November 5th, 2015.

Study design

It is a retrospective record based study.

Sample size

Cases registered from September 2014 to September 2015 were collected which constituted to 142 cases.

Data collection

Permission for conducting the study was taken from concerned authorities. Data for ANC cases registered during September 2014 to September 2015 were taken from ANC register. The register number from these cases were taken and case records were collected from MRD from these numbers. Data regarding age, religion, gestational age at time of registration, gravida, para, birth interval between pregnancies were taken. Hemoglobin level was taken from the case record and was classified as mild, moderate and severe based on WHO classification.

Data analysis

Data was analyzed using SPSS software version 20. Descriptive statistics was calculated using frequencies and percentages. Association was calculated using Chisquare test and Yates correction was used wherever required.

RESULTS

A total of 142 pregnant women were registered for ANC care for the first time September 2014 to September 2015

in RHTC, Yadwad, Dharwad, Karnataka, India. In the present study majority of the pregnant women belonged to the age group of 20-25 years (76.1%) followed by age group of 26-30 years. 1.4% of the pregnant women belonged to age group of less than 20 years and more than 30 years each (Table 1).

Table 1: Age wise distribution of pregnant women.

Age (in years)	Frequencies	Percentage
≤19 years	2	1.4
20- 25	91	76.1
26- 30	30	21.1
>30	2	1.4
TOTAL	142	100

Majority (92.1%) of the study participants belonged to Hindu religion and rest (7.8%) belonged to Muslim religion. 78 (54.9%) of pregnant women registered during first trimester of pregnant followed by 33 (23.2%) women during second trimester and 31 (21.8%) women registered during third trimester of pregnancy (Figure 1).

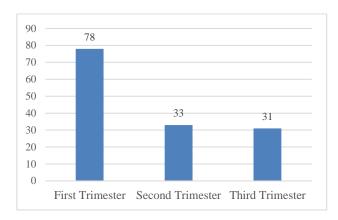


Figure 1: Distribution of pregnant women according to gestational age at registration/booking.

In the present study 55 (38.19%) women were registered for first pregnancy and 80 (55.5%) belonged to parity 1 and 2. Rest belonged to more than two parity (Table 2).

Table 2: Distribution of pregnant women according to their parity.

Parity	Number	Frequencies
0	55	38.19
1-2	80	55.5
>2	7	4.86
Total	142	100

55 (38.7%) of the women were pregnant for the first time. Among the women were previously pregnant; only 8 women followed birth spacing of 3 years or more. Rest (70) had inadequate birth spacing of less than 3 years. (Figure 2).



Figure 2: Distribution of pregnant women according to birth spacing.

Prevalence of anaemia in the present study was found to be 75.2% with 121 cases among which 101 cases were mild form, 19 cases were moderate form and only 1 case was of severe form with Haemoglobin level below 7g/dl. (Figure 3 and Table 3).

Table 3: Distribution of pregnant women according to degree of anaemia.

Classification of anaemia	Frequencies	Percentage
Mild	101	83.47
Moderate	19	15.70
Severe	01	0.82
Total	121	100

Table 4: Association of anaemia with different variables.

Characteristics	Anaemia present	Anaemia absent	P value	
Age (in years)				
<u><</u> 19	2	1		
20 - 25	91	16		
26 - 30	28	3		
>30	2	1	0.9783	
Parity				
0	43	12		
1-2	72	8		
<u>≥</u> 3	6	1	0.2253	
Gestational age at booking				
First trimester	59	19		
Second	32	1		
trimester	32	1	- 0.0063	
Third trimester	30	1	0.0003	
Birth interval				
< 3 years	64	8		
≥3 years	14	1	0.9643	

The study didn't show any significant association between Anaemia and age of present pregnancy, trimester of booking/registration, birth interval from last pregnancy and parity when analysed using chi square test with yates correction at significance at p<0.05 (Table 4).

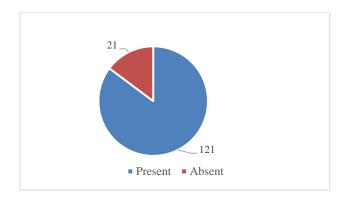


Figure 3: Prevalence of anaemia among the pregnant women.

DISCUSSION

The study was a retrospective record based study conducted in rural health training centre, Yadwad. The study noted that a higher proportion of pregnant registered after first trimester (45.1%) with 21.82% registering in the third trimester. This was comparatively better than studies done in Saraswati Institute of Medical College, Hapur, Ghaziabad were majority of pregnant women registered during third trimester (49.7%) and only 35.8% of the pregnant women registered during first trimester.³

The present study revealed high proportion of anemia cases (85.2%). This was comparable to study done in Government Lady Goschen hospital, Kasturba Medical College, Mangalore (80.6%) and Saraswati Institute of Medical College, Hapur, Ghaziabad (78.4%). 3,4

Most cases of anemia were of mild degree (83.47%) followed by moderate degree (15.7%). This was similar to the study done in Mangalore were 83.3% of the anemia cases were mild and rest were moderate degree³. This was in contrast with NFHS 3 reports and study done by Agarwal et al where most common type of anemia was of moderate degree.^{5,6}

The present study did not show any significant association of anemia with age of the pregnant women, time of registration for pregnancy in terms of trimester, parity and birth interval between pregnancies. This was similar to study done by Cyril C et.al. in Enugu, South Eastern Nigeria but the study done in Mangalore showed significant association between association between anemia in pregnancy and inter pregnancy interval (<3 years) and parity (\ge 3).^{4,7}

CONCLUSION

Incidence of LBW in these communities was high. Maternal under-nutrition, maternal anaemia and rural settlements were significantly associated with babies with low weight at birth. There is a need for continued focus on maternal nutrition at the time of conception and during pregnancy both for the optimum feto-maternal health and national development.

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Institutional Ethics Committee

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