



**ANALYSIS OF PREVALENCE OF EPIDEMIOLOGICAL FACTORS IN PREGNANT WOMEN WITH ANEMIA ATTENDING ANTENATAL OP IN A TERTIARY CARE CENTRE**

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**Abstract :**

**ABSTRACT-Objective** To see the prevalence of epidemiological factors in relation with anemia in pregnant women attending antenatal OPD in a tertiary care centre. **Materials and methods** Descriptive analysis of 250 pregnant women in a tertiary care centre, attending antenatal outpatient department irrespective of gestational age, parity, socioeconomic status, education and residential status were included in this study. Pregnant women with anemia with other comorbid conditions, were excluded from the study. **Results** The prevalence of anemia more common between 20-30 years of age group and common with 2nd and 3rd pregnancy and in women from low socioeconomic status who hails from rural area with poor dietary habits especially with poor iron intake. **Conclusion** Anemia is more common in multigravida, especially who belongs to low socioeconomic status.

**Keyword :**

**KEY WORDS** Anemia, pregnant women, Iron deficiency.

**INTRODUCTION**

Anemia is major public health problem of developing countries. Incidence varies from 40-90% in India. It contributes about 10-15% of direct maternal deaths in India. More than 70% of pregnant women in south East Asia suffer from nutritional anemia.

Anemia is defined as the condition where there is decreased level of hemoglobin concentration resulting in decrease in oxygen carrying capacity of blood. World Health Organization defines anemia in pregnant women as Hemoglobin level less than 11grams% and the hematocrit less than 0.33. In India hemoglobin level less than 10grams% is considered as anemia as defined by Federation of obstetrics and gynecological societies of India.

Total iron requirement in pregnancy is about 900-1000mg. Iron requirement varies, in early pregnancy 4mg / day and in 20-32 weeks it is about 5.5mg/day and in more than 32 weeks it ranges from 6-8 mg/day.

**Causes of anemia in pregnancy are,** 1) Nutritional – more than 50% - iron deficiency, and folate and Vitamin B12 deficiency.

2) Acute, chronic blood loss. 3) Chronic diseases like chronic renal failure and some drugs like alpha methyl dopa, metformin, etc., 4) Hemoglobinopathies 5) Hemolytic anemias 6) Aplastic anemia.

Effects on pregnancy:

Maternal effects:

During pregnancy:

Mild anemia may not have any effect on pregnancy and labour. Moderate anemia may cause increased weakness, poor work performance. Severe anemia has poor outcome. Anemia can cause increased susceptibility to infection, increased risk for cardiac failure in case of severe anemia, risk for preterm labour, preeclampsia and antepartum hemorrhage, can be aggravated by anemia.

During labour:

During labour there is increased incidence of uterine inertia and anemia patients are not able to withstand even the normal amount of blood loss during delivery.

During puerperium:

In puerperium, puerperal sepsis, sub involution of uterus, failure of lactation, delayed wound healing and thromboembolic complications can occur, in anemia patients.

Fetal effects:

Anemia will cause increased risk of preterm birth, low birth weight babies and intrauterine growth restriction especially with chronic anemia.

## **MATERIALS AND METHODS**

250 pregnant women with anemia during 6 months period from June 2011 to November 2011 attending antenatal OPD in tertiary care centre, irrespective of gestational age, parity, socioeconomic status, education, residential status were taken for study of prevalence of these factors in relation to anemia. After taking consent, proforma was filled in. Blood hemoglobin level was checked. Data were tabulated and analysed.

Among 250 pregnant women with anemia 231 were having non vegetarian dietary habits and 19 were vegetarian. Among that 231, 127 (55%) used to have meat, egg, poultry, once in 15 days to 1 month. 68 (29.4%) used to have meat, egg, poultry, once in a week. 36 (15.5%) used to have meat, egg, poultry twice to thrice in a week. Majority of the patients affected with anemia was having poor dietary habits.

41 pregnant women (16.4%) had oral iron supplementation for 4 months starting from 5<sup>th</sup> month. Their blood hemoglobin levels were between 9 to 10 grams %. Anemia is more common with pregnant women with irregular oral iron intake (because of gastrointestinal side effects like nausea, reflux esophagitis) (54.8%). About 28.8% had no oral iron supplementation.

Anemia is more prevalent in third trimester 61.2% (153 pregnant women) and in second trimester it is about 31.2% (78 pregnant women) since iron demand increases from second trimester, it is more prevalent in second and third trimester, and also because ours is tertiary care centre, most of the anemia patients

TABLE - I	
Age	No.of Patients
16-19	45 (18%)
20-25	105 (42%)
26-30	63 (25.2%)
More than 30	37 (14.8%)

Anemia is common (42%) among 20 to 25 years of age group.  
18% were teen agers.

TABLE – II	
Obstetric code	No.of Patients
Primi	85 (34%)
2-3	131 (52.4%)
More than 3	34 (13.6%)

Anemia is more common among multigravida (66%) and more prevalent in 2<sup>nd</sup> and 3<sup>rd</sup> gravida (52.4%). 34(13.6%) were grand multi.

TABLE – III	
Community	No.of Patients
SC	115 (46%)
MBC	64 (25.6%)
BC	52 (20.8%)

OC	19 (7.6%)
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Anemia is more prevalent in SC Community (46%)

TABLE – IV	
Residence	No.of Patients
Rural	163 (65.2%)
Urban	87 (34.8%)

Anemia is more common in rural population, about 65.2%.

**TABLE – V**

Education	No.of Patients
Uneducated	39 (15.6%)
Primary	63 (25.2%)
Middle school	46 (18.4%)
High school	45 (18%)
Higher Secondary	30 (12%)
Degree	27 (10.8%)

Anemia is more prevalent among women who studied less than middle school level (59.2%). In pregnant women with anemia about (40.8%) were studied upto high school and above.

**TABLE – VI**

Socio economic status	No.of Patients
Class I	Nil
Class II	Nil
Class III	47 (18.8%)
Class IV	132 (52.8%)
Class V	71 (28.4%)

economic status.

About 172 (68.8%) were housewife and 78 (31.2%) were working.

**TABLE – VII**

Dietary habits	No.of Patients
Poor	127 (55%)
Satisfactory	68 (29.4%)
Good	36 (15.5%)

TABLE – VIII	
Oral iron supplementation	No.of Patients
Regular	41 (16.4%)
Irregular	137 (54.8%)
No iron intake	72 (28.8%)

TABLE – IX	
Gestational age	No.of Patients
I trimester	19 (7.6%)
II trimester	78 (31.2%)
III trimester	153 (61.2%)

TABLE – X	
Categories of anemia	No. of Patients
Moderate	153 (61.2%)
Severe	83 (33.2%)
Very Severe	14 (5.6%)

were referred cases mainly in second and third trimester, from periphery hospitals. 10gms %. Majority of the pregnant women with anemia had moderate degree of anemia, 153 patients (61.2%). About 83 patients (33.2%) had severe anemia. Only 14 patients (5.6%) had very severe anemia.

### CONCLUSION:

Anemia is common among multigravida belongs from low socio economic status with poor dietary habits especially with poor iron intake. Prevention of anemia starts from adolescence. Prevention can be done by Iron fortification, deworming, antimalarial prophylaxis in endemic areas and identification and treatment of anemia. The Ministry of Health, Government of India now recommended intake of 100mg of elemental iron and 500 microgram of folic acid, atleast for 100 days, to all pregnant women, in the second and third trimesters of pregnancy.

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