

# Prevalence of Anemia in Pregnant Women in Central Punjab

MUHAMMAD AKRAM CH.<sup>1</sup>, HUMAIRA AKRAM<sup>2</sup>, AMNA MUBEEN<sup>3</sup>

## ABSTRACT

**Aim:** To assess the magnitude of anemia in pregnant women

**Study design:** Retrospective study.

**Study setting :** Gynaecology and Obstetrics Department of DHQ hospital Sargodha.

**Sample size :** 200 pregnant women.

**Methods:** A retrospective study was done on 200 women who attended the Gynecology and Obstetrics Department of DHQ hospital Sargodha for antenatal evaluation. Record of all the patients was examined. They were categorized into groups of mild, moderate and severe anemia depending upon Hb level.

**Results:** 200 pregnant women were included in this study. Out of these 168(84%) were found to be anemic. 91(82.7%) were in the age of 26 to 35 years of age. Out of the pregnant women who were evaluated at more than 37 weeks of gestation, 84.56 were anemic as compared 82.35% of women at less than 37 weeks.

**Conclusion:** The frequency of anemia in pregnancy in underdeveloped countries is 84% as compared to UNO reported frequency of 56%. Anemia prevalence is more in mid reproductive age and in term pregnancy.

**Keywords:** Anemia, term pregnancy

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## INTRODUCTION

Anemia is a common nutritional disorder of the world. According to the literature data, approximately 700 million people have overt or latent deficiency of iron in their body related to the poor diet. The highest risk groups include pregnant women (50-60%) and women of child bearing age (20-40%). Anemia of pregnancy denotes the decreased level of hemoglobin concentration in blood of fetus carrying mother<sup>1</sup>.

Although it is mainly due to Iron deficiency, but other nutritional deficiencies like folic acid may contribute. During the pregnancy period, an increased number of the rapidly dividing cells are present because of fetal growth which leads to increase in the requirement of folate. If folate is not taken in adequate amount, it will cause its deficiency in serum resulting in a decrease in erythrocyte folate concentration. <sup>2,13</sup>Anemia can be mild (Hb 10-10.9mg/dl) moderate (08-09.9mg/dl) or severe (<8.0mg/dl). Anemia may be asymptomatic, mild to moderately symptomatic or severely symptomatic. Usual symptoms of anemia include generalized weakness, easy fatigability, aches & pains and exertional dyspnea<sup>3</sup>. The first assessment of an anemic pregnant woman shall include the medical

history, a physical examination and the quantification of the erythrocyte indices, serum concentrations of iron and ferritin. The measurement of this last one has the highest sensitivity and specificity for diagnosing iron deficiency. The frequency of low Hb levels during pregnancy is especially high in under developed countries. Poor socioeconomic status, self ignorance and lack of education in addition to poor antenatal care aggravate the problems. This lead to increased maternal & fetal mortality rates, still births and premature labors<sup>4</sup>.

The present study was conducted to assess the magnitude of anemia in pregnant ladies when they come to hospital in later periods of gestation for antenatal checkup or delivery.

## MATERIAL & METHOD

This study was done retrospectively on 200 patients who attended Gynae and Obstetrics Department of DHQ hospital Sargodha for antenatal evaluation from September 2011 to December 2011. The record of all the patients was examined regarding the patient age, gestational age, educational level, social status, and rural urban background. The consecutive non probability sampling technique was used. Hb level was checked by spectrophotometer. The subjects were categorized according to their Hb levels into mild (Hb: 10.0-10.9gm/dl), moderate (Hb:8.02-9.9 gm/dl) & severe (Hb:<8.0gm/dl) anemia. Data was entered and analyzed using computer program SPSS- 11.

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<sup>1</sup>Assistant Professor Anatomy, Sargodha Medical College

<sup>2</sup>Associate Professor Gynecology and Obstetrics, Sargodha Medical College

<sup>3</sup>Lecturer Anatomy, Sargodha Medical College

Correspondence to Dr. Humaira Akram Email: 3humaira@gmail.com Cell: 0300-8401353

## RESULTS

Among the 200 pregnant women, the age of the study subjects varied from 17 years to 45 years. Mean age was 28 years. Out of these 200 pregnant women 168 were anemic & 32 were having Hb level within normal range. HB level in different age groups were analyzed as normal, mild, moderate and severe and it was seen that severe anemia was relatively more prevalent in older age group as shown by the following table. Anemia was also analyzed in the full

term and preterm pregnancies as given below in table 3.

Table 1: Distribution of anemia (n=200)

Subjects	Frequency	%age
Total Anemic	168	84
Severe	13	7.73
Moderate	88	52.38
Mild	67	39.88
Normal	32	16

Table 2: Distribution anemia with reference to age

Age	Severe	Moderate	Mild	Normal	Total
15-25	4(6.15%)	39(60%)	22((33.84%)	11((14.47%)	76
26-35	5(5.49%)	45(49.45%)	41(45.05%)	19(17.27%)	110
36-45	4(33.33%)	4(33.33%)	4(33.33%)	2(14.28%)	14

Table 3: Distribution of Anemia with reference to gestational age

Gestational age	Severe	Moderate	Mild	Normal	Total
Term (>37 weeks)	6(4.76%)	67(53.17%)	53(42.06%)	23(15.43%)	149
Preterm (<37 weeks)	7(16.66%)	21(50%)	14(33.33%)	9(17.64%)	51

## DISCUSSION

Anemia is an important public health problem worldwide. Despite of the widespread economic and scientific development, over a quarter of the world population remains anemic. About half of this burden is because of Iron deficiency. The most vulnerable group among the affected people, are pregnant women due to their loss of iron derived from menstruating or to their highest iron needs during pregnancy. This increase in needs is not satisfied by the regular diet, since it includes an insufficient amount and/or low bioavailability of iron.

The causes of anemia include genetic factors, nutritional deficiencies, and infectious agents<sup>5</sup>. Iron deficiency is probably the single most common and important cause of anemia in pregnancy because the physiological changes associated with pregnancy exert a demand for additional iron load needed for transfer to the foetus<sup>6</sup>.

Various studies have reported variable prevalence rates of anemia during pregnancy and it varies from 33% to 75%<sup>7,8,13</sup>. Anemia is a common problem of underdeveloped countries. Low level of the Hb is commonly observed in the pregnant women. WHO has recommended a cut off value of 11.0g/dl for hemoglobin to define anemia at any time during pregnancy<sup>9,10</sup>. In present study frequency of anemia in pregnant ladies is 84% while UNO has reported 56% anemia in pregnant ladies from low income group. Normal physiologic changes in later periods of pregnancy also affect the hemoglobin concentration due to haemodilution<sup>11</sup>. Severe

maternal anemia is associated with complications like prematurity, spontaneous abortions, low birth weight and fetal deaths, however mild to moderate iron deficiency does not appear to cause a significant effect on fetal hemoglobin concentration<sup>12</sup>. Among the women, iron supplementation not only improves the physical performance but also leads to better maternal, neonatal, infant and childhood outcomes<sup>14</sup>.

## CONCLUSION

It is concluded in our study that frequency of anemia in pregnant women in our setup is much higher than the reported frequency in literature. Remedy work at door step level for correction of anemia is required with the help of lady health visitors because most of the women visit the hospital in later stage of pregnancy. Implementation of the various programmes for the control of anemia specially in developing countries require careful baseline epidemiologic evaluation, selection of the suitable interventions and continuous monitoring for effectiveness.

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