

Incidence of Anemia in Pregnancy in Remote area of Hyderabad Pakistan

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ABSTRACT

The major health problem mainly in the developed countries is anemia during pregnancy which is linked with the many side effects. World health organization (WHO) has set the limit to define anemia if the hemoglobin (Hb) level is less than 11 g/dl WHO has stated that if the prevalence of anemia is 5.0% or higher it should be considered as a significant problem. If in any population the prevalence of anemia is more than 40% it must be specified as a major health problem. It was a cross-sectional study containing 380 women age ranges between 19-42 years. All healthy pregnant women with HB less than 11g/dl were recruited into the study. Information may be obtained on the health, such as continuity, menstrual features, infections, iron, or blood transfusions, etc. The government needs to take strong steps to boost women's education and socio-economic status, increase the number of healthcare providers and increase public education. It is important for the government to develop dietary behaviors and adhere to the recommended programs. Long-term delivery of iron supplements and lifestyle improvements.

Key words: Anemia, Ferritin, Hemoglobin, Iron deficiency, Pregnancy

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INTRODUCTION

In developing countries, anemia during pregnancy, which is due to the many side effects, is the biggest health concern [1]. The World Health Organization (WHO) has set a limit for determining anemia if the amount of hemoglobin (Hb) is less than 11 g/dl. The WHO has indicated that it should be considered a major problem if the incidence of anemia is 5.0 percent or higher [2]. If the prevalence of anemia in any population is more than 40 percent [3], it must be specified as a major health issue. 56% of pregnant women suffer from anemia in every low- and middle-income household [4]. Micronutrient deficiencies and anemia of folate, iron, and vitamin A and B12 caused by bacterial infections such as malaria and

hookworm, or chronic infections such as TB and HIV, are the most common causes of anemia found in pregnant women in developing countries [5]. Iron deficiency, particularly among pregnant women, is the most common nutritional deficiency globally. Owing to the increased demand for iron during pregnancy, pregnant women are more vulnerable to anemia. The incidence of anemia is 32.4 % in non-pregnant women, and 44.2 % in pregnant women, according to the WHO [6]. During pregnancy, anemia is very upsetting. As maternal daily iron needs increase up to 10-fold from 6 mg/dl/day during pregnancy, the demand for fetal iron increases [7]. Increased fetal iron demand is compensated by stored maternal iron, resulting in an increased risk of anemia with iron deficiency in pregnant females [8]. This lack of iron as anemia has a significant effect on both the fetus and the mother. Mothers with anemia also experience symptoms such as elevated levels of fatigue, decreased mental capacity and decreased exercise performance [9].

Besides, there is an Increased chance of delivery prematurely, low birth weight, and Abortion spontaneously, when the Hb level is below <90 g/L. However, the poor health condition of the fetus and low iron results from maternal IDA [10]. There is also a greater risk of morbidities and the perinatal death rate for pregnant women with anemia [11].

The metabolism of fetal iron is primarily dependent on the delivery of maternal iron through the placental, hence the consequences of fetal anemia contribute directly to the degree of maternal iron deficiency and increased IDA mortality [12]. IDA varies across countries but is a significant public health concern in the developing world that represents racial inequalities, socio-economic conditions, eating trends, medical treatment, and the prevalence of parasite diseases.

MATERIALS AND METHODS

It was a cross-sectional done in department of Gynaecology and Obstetrics, Civil Hospital Hyderabad Pakistan from June 2020 to June 2021. 380 woman of age rages between 19-42 years were registered for this study. In the sample, all healthy pregnant women with Hb below 11g/dl were recruited.

The research omitted pregnant women who had any co-morbidities, such as hypertension, acute/chronic disease, gestational diabetes, diabetes, any prior history of blood transfusion, and obesity. The questionnaires included socio-demographic data relating to age, education, and socio-economic status, any previous or complicated medical illness during pregnancy, obstetric history, and blood testing.

Prior to informed consent, the approach of the study was explained to the participants. They identified the questionnaire in their first language and filled them out. Using IBM SPSS 21.0, data was obtained, tabulated, and statistically analyzed and the P-value was considered in <0.055.

RESULTS

Out of 380 women, 240 met the inclusion criteria and participated. Results showed that out of the total, the majority of the women were in the age group 31-42 years whereas 42% were in the age range 18-30 years. 65% of women were illiterate and 33% had some knowledge about education. Many of the pregnant women were belonged to the lower class whereas 85% of them were belonging to the middle class and only 15% belonged to the upper class.

According to parity and trimesters

According to the trimesters, females were divided into different categories of their trimester such as 49.5% were in the 3rd trimester, 37.4% were in the second trimester whereas 14% were in their first trimester.

According to ferritin level

To evaluate the authentic figures of anemic pregnant women additional investigations were required to perform on those who were having Hb levels less than 11 g/dl. Categories were specified according to the serum ferritin level. Of 240 women 47.2% were having a ferritin level less than 12 mg/dl whereas 46.3% were having a serum ferritin level ranging from 12-30 mg/dl. Remaining 5.2% were having 31-300 mg/dl ferritin level whereas 1.2% was in the last category.

According to HB level

Out of 380, 240 women were anemic while the rest of them were normal.

According to the severity of anemia

Anemic people were grouped according to the severity; mild, moderate, and severe. In the mild category, the hemoglobin level was 9.7% and number of participants falling in this category were 151. Whereas in the moderate category, Hb level was 7-20 and 78 participants were in them while the rest 11 participants were in a severe category having Hb level less than 10.

DISCUSSION

Iron deficiency associated with anemia is the most prevalent micronutrient for pregnant women with serious health conditions. It also includes the association and association of other dietary disorders, including zinc, folic acid, vitamin A, or a secondary source. The frequency of many and parous pregnancies is higher [13]. ID and IDA factors also differ from those in the developed countries in the developing world [14]. The maternity assessment of iron reserves is problematic due to complex physiological changes. Intrauterine growth retardations, early birth, low birth weights, extended working time, greater risk of illness, elevated maternal and pre-born mortality, muscle disorder, and impaired physical ability are all linked to iron deficiency anemia during breastfeeding [15]. A nuanced and independent factor influences birth weight in addition to maternal Hb and serum ferritin. One of the most significant was the mother's anthropometry and her dietary usage.

Low serum ferritin was the most accurate modern ID diagnostic test. <20 µg/L constitutes a sufficiently high identity index [16]. Owing to the increased requirement for iron during breastfeeding, iron reserves can be maintained during pregnancy without dietary consumption alone [17]. Low dosage oral supplements beginning at least with mid-gestation (40 mg of specific iron a day can increase ID and IDA and enhance neonatal outcomes and maternal well-being) intermittent oral therapy programs, particularly in areas with minimal supplies or access. intermittent therapy regimens (weekly and twice weekly). A rise in the risk of premature and child death is linked with overtreatment of iron during pregnancy.

It is particularly in late or intolerant to oral iron and/or with extreme deficiency or anemia that intravenous iron is important in the treatment and prevention of ID and IDA. Over the decades, iron deficiency etiology has been consistent. The high prevalence of IDA was responsible for multiparity, small birth distances, low socioeconomic status, and lack of education [9]. Furthermore, in the second trimester of her birth, several women took part in the clinic. So, at the time of birth, they had lack of iron intake. Failure to comply with iron supplements was also a major contributing factor. Almost every country in South Asia, including Pakistan, has domestic anemia control systems [18], but that remains the issue. This research is the basis for IDA eradication strategies. To tackle this dilemma, iron and folic acid supplements are not enough alone, but a multi-faceted approach is important for this question. In addition to regular hematologic criteria screening during breastfeeding, diet and counselling education should be included in the anemia eradication program. Researchers should work on preventive nutrients and health enforcement methods.

CONCLUSION

Detailed health data may be obtained, such as parity, menstrual properties, cancer, iron or blood transfusions, etc. In order to boost the standard of education and social and economic status of women, increasing the number of medical practitioners, and increasing public formation, the government must take decisive action. Health practices need to be changed and the prescribed government services need to be implemented. Building on puberty may raise hemoglobin levels and avoid anemia during pregnancy through long-term iron supplementation and food adjustment.

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