

Prevalence of Antenatal Anemia in Selected Rural Areas of Southern Punjab, Pakistan.

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Abstract

Background:

Anemia impairs and reduces physical work capacity and in severe cases increases risk of mortality particularly during prenatal period. There are no previous studies done on anemia in pregnancy in the study area.

Objective:

To assess Much needed Prevalence of anemia in pregnant women visiting Selected EMOC Centre BHU Mehrabwala, BHU Their Zabti and THQ Hospital Ahmed Pur East, District Bahawalpur.

Study Design: Cross Sectional
Observational

Place and Duration of Study:

pd of THQ Hospital Ahmed Pur East, BHU Mehrabwala and BHU Their Zabti District Bahawalpur from November 2016 to March 2017.

Methodology:

Histories including relevant questions were recorded in a preformed questionnaire. Clinically examined for Pallor and other relevant examination in reference to anemia and Hemoglobin was checked by digital Hemoglobin meter then confirmed in selected patients in whom clinical correlation was doubtful with respect to value of Hb by Sahli's Haemoglobinometer or by automated haemalyzer. Results were recorded and analyzed.

Results:

A total of 487 patients were examined in this study. Prevalence of anemia was very high with poor family background being the main determinant 81.7% (398/487). Out of these 201/398 (50.5%) had mild anemia, 181/398(45.47%) moderately anemic, and 16/398(4.02%) severely anemic. 96% were 18-30 years of age. All the women having anemia belonged to low socioeconomic status.

Conclusion: Very High prevalence of anemia in pregnancy was mainly linked with socio economic and dietary factors.

Keywords: Anemia, Hemoglobin, Pregnancy, BHU, THQ

Introduction

Anemia is defined as a condition in which the hemoglobin concentration of the blood is lower than normal for a person's age and gender leading to

reduced oxygen carrying capacity of the blood^[1-2]. According to WHO criteria minimum acceptable hemoglobin level during pregnancy is 11 g/dl. Criteria further divides anemia in pregnancy into "Mild Anemia" (hemoglobin 10-10.9 g/dl), "Moderate anemia" (hemoglobin 7.0-9.9 g/dl) and "Severe Anemia" (hemoglobin <7 g/dl^[2].

It has multiple precipitating factors that may be genetic, such as haemoglobinopathies; infectious diseases, such as malaria, intestinal helminthes, and chronic infection or nutritional deficiency, which includes iron deficiency as well as deficiencies of other vitamins and minerals, such as folate, vitamins A and B₁₂, and copper^[3].

Anemia is a global public health problem affecting both developing and developed countries. It occurs at all stages of the life cycle but is more prevalent in pregnant women and young children.

In developing countries, the cause of anemia during pregnancy is multi-factorial and includes nutritional deficiencies of iron, folate, and vitamin B₁₂ and also parasitic diseases, such as malaria and hookworm. The relative contribution of each of these factors to anemia during pregnancy varies greatly by geographical location, season, socioeconomic status and dietary practice. In south Asia iron and folate deficiencies are the most common causes of anemia in pregnant women. Vitamin B₁₂ deficiency may be an unrecognized contributor to anemia in this region of the world due to reliance of the population on grains as dietary staples and low consumption of foods of animal origin which are the primary source of dietary vitamin B₁₂ [4].

Antenatal anemia especially in Primigravidae comprise a high hazard cluster for anemia, pre eclampsia, low birth weight and fetal growth restriction [5]. In Primigravidae,

teenage girls are twice as likely to die of pregnancy associated complications [6].

Materials and Methods

This cross sectional observational study was carried out in Out Patient Department of Tehsil Head Quarter Hospital Ahmed Pur East, Basic Health Unit Mehrabwala and Basic Health Unit Their Zabt. THQ Hospital Ahmed Pur East is a secondary level health facility located at a distance of 50km from Bahawalpur. While remaining two are primary health facilities located at a distance of almost 60km from Bahawalpur, Pakistan. BHU Mehrabwala is a 24/7 EMOC center having all basic facilities for antenatal care. Total patients in this study were 487. This study carried out from November 2016 to March 2017.

Inclusion Criteria In this study all the pregnant mothers who were

residents of Tehsil Ahmed Pur East, not recently transfused, who had no chronic medical diseases not diagnosed haemoglobinopathies, and who had no early bleeding or antepartum hemorrhage were included.

Data Collection and Analysis

Data was collected by using pre tested and pre designed questionnaire; including histories relevant questions, hemoglobin status tested by using Sahli's Haemoglobinometer and electronic Haemoglobinometer and verified later in doubtful values by complete blood

count by automated haemalyzer. Sampling was done by trained paramedical staff. All data were analyzed manually. Results were generated and documented.

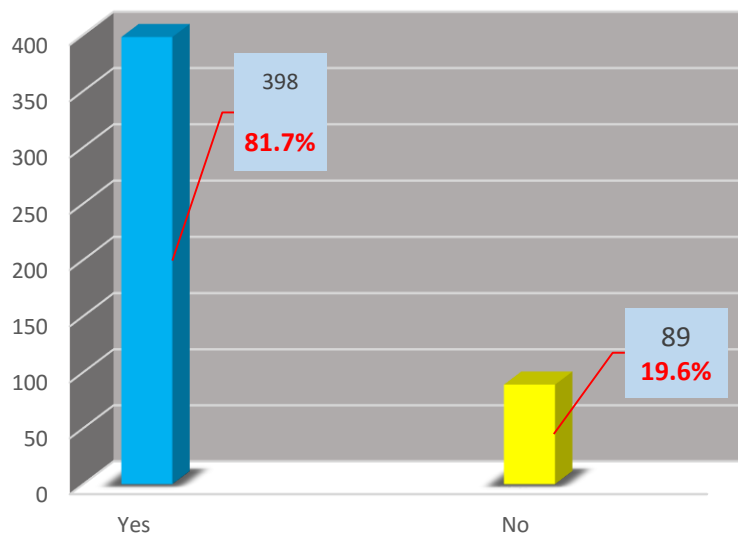
Results

A total of 487 patients were examined in this study. Prevalence of anemia was very high with poor family background being the main determinant 81.7% (398/487). Out of these 201/398 (50.5%) had mild anemia, 181/398(45.47%) moderately anemic, and 16/398(4.02%) severely anemic. 96% were 18-30 years of age.

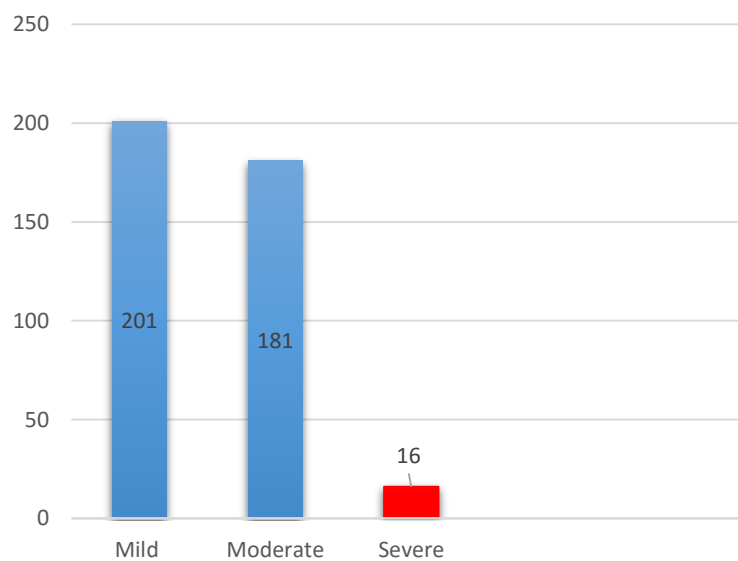
Total Patients	Anemic Patients	Normal Patients
487	398	89
	81.7%	19.6%

Total Anemic Patients	Mild Anemia	Moderate Anemia	Severe Anemia
398	201	181	16
	50.5%	45.47%	4.02%

Prevalence of Antenatal Anemia



Severity of Antenatal Anemia



Anemia was more prevalent in Primigravidae. Anemia was found to be more common in rural areas in our study. Intake of less meals /day and vegetarian status, multiparity, poor education, less birth spacing, social myths were other factors significantly associated with anemia in Primigravidae in this study. Nutritional deficiencies, multiparity, poor education, rural residence, malaria, hook worm infestation were associated with anemia in different studies from developing countries [7,8,9].

Discussion

There has been small decrease (5%) in prevalence of anemia among pregnant women since 1995 [10] but nothing special in these areas as this rate is towards increasing trends. More than half of pregnant women in African & Asian countries are anemic versus 15% anemia in pregnant women in developed countries [11]. Prevalence of antenatal anemia in this study was 81.7%. A study in Lahore showed prevalence of antenatal anemia in 78.1% mothers in urban areas of Lahore [12].

Another study from Abbottabad showed mild anemia in

55.9%, moderately severe anemia in 31.1%, and severe anemia in 13% Primigravidae [13]. Its Prevalence in various regions of India varies between 33-100% [14] in a Sudanese study 62.2% and 26.2% in a study from Bahrain [15]. In this study 50.5% had mild anemia, 45.47 % moderate anemia and 4.02% severe anemia.

This very high prevalence is mainly due to poor socioeconomic status in the area where most of the people have no definite source of income. Their families are large and dependent upon a single poor soul. Lack of education is another major factor worsening the matter. Gender

favoritism towards male acts as a catalyst. Early marriages, no birth spacing and multiparity are other big factors in this regard. A very sincere and efficient input is required at government, non-government and personal level to have mercy upon these poor people .

Anemia has very effective relationship with adolescence [10, 16]. In this study 96% Primigravidae belonged to age group 18-30 years.

Conclusion

Antenatal anemia has great impact on quality of life along with general health care of mother and fetus.

Maternal, perinatal and infant mortality increase 500 fold in pregnant women with severe anemia [17]

Recommendations

- ✓ Providing and ensuring iron and folate supplements at the door step of such poor patients of remote areas and also flour fortification with iron.
- ✓ Health education of pregnant mothers and their families regarding nutrition deficiencies along with proper birth spacing.
- ✓ Discourage gender favoritism more prevalent in these areas.
- ✓ More surveys and research work so that primary prevention can be done.

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