Prevalence of Anemia Among Women of Reproductive Age Presenting at Teaching Hospital Gujrat

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ABSTRACT

Objective: To resolve the prevelance of anemia with associated factors in women of childbearing age of Gujrat.

Study Design: Cross sectional study

Place and Duration of Study: This study was conducted at the Government Aziz Bhatti Shaheed Teaching Hospital (ABSTH), Gujrat from March 2018 to August 2018.

Materials and Methods: 150 women of 16-50 years of age. *Sampling Technique:* Random Sampling. Women presenting at OPD of Medicine & Gynecology Department of ABSTH, Gujrat were questioned via a structured questionnaire to determine associated factors after taking informed consent. Laboratory report of blood tested for Hemoglobin (Hb) within last 3 months were recorded, if not they were tested for Hb from Pathology Department of Teaching Hospital. *Analysis:* Microsoft Excel.

Results: In childbearing age (16-50 years) of women anemia was found to be 56%, which meant that 84 of the 150 women suffered from anemia. 26% of the anemic women had severe anemia, while 41% had moderate anemia. The highest prevalence of anemia was among women of 30-43 years age group. Most of the women who were suffering from anemia had unsatisfactory dietary habits and poor socioeconomic status.

Conclusion: Anemia is higly prevalent in reproductive age group women of Gujrat, Pakistan presenting at public sector hospitals. Associated with lower socio-economic status, poor dietary intake and lack of both education & health education.

Key Words: Iron Deficiency, Socioeconomic status, Anemia, Reproductive Age, Dietary Habbits

INTRODUCTION

Anemia is a condition where the red blood cells are less than the normal count or the hemoglobin level is low. *Anemia* undermines the capability of blood to transport oxygen. People with *anemia have the symptoms* fatigue, tiredness, pale and may develop shortness of breath and have palpitations. Anemia is a global health concern and the population under influence is around 1.62 billion which accounts to 24.8% of the world population. However the population under highest influence of anemia are non-pregnant women (468.4 million, 95% CI: 446.2–490.6).In the Eastern Mediterranean Region of WHO anemia in non pregnant women is 32.4%.

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In Pakistan Anemia is characterized as a public health issue at a higher end for preschool children and at a moderate level for non pregnant women of reproductive age.[1] Anemia among women in their child bearing age in Pakistan is around 54% with a variation of 50-70% in different parts of the country. [2]

Many factors contribute to anemia which include genetics, infectious diseases, nutrition, multiparity, frequent labor, abortions, but iron deficiency accounts for 75% of anemia in women.[3-5] Iron deficiency needs to be addressed by young women considering their physical growth, menstruation cycles, pregnancy and fetal growth life stages.[6, 7] Mothers having deficient iron supplies are at high risk of having children who are also deficient in iron.[8, 9] Insufficient consumption of foods rich in iron and low bioavailability of iron taken is the primary cause of iron deficiency in pregnancy.[1] In Developing countries multiparity, low socioeconomic status, low education and lack of awareness are also contributory factors to iron deficiency.[10]

In pregnancy anemia is a known risk which can endanger the life of mother and fetus. Anemia is linked with high rates of pre-eclampsia (31.2%), maternal sepsis and pre-term labor (28.2%).[3, 11] Anemia can be classified into three types in pregnancy as severe anemia where hemoglobin levels are lower than 7.0 g/dL. The other two types are and mild anemia where

hemoglobin levels are between 7.0-9.9 g/dL and 10.0 to 11.0 g/dL respectively.[12, 13]

In 2005, a study was conducted in Ethiopia to study the correlates of anemia which showed that rural residence, poor hygienic conditions, poor education and economic situation as well as multiparity were key predisposing factors. [14] Similar studies conducted in Tanzania, Tabas, Argentina and Lebanon also showed that the major risk factors as well as correlates are common to all developing countries. [15-19] In the urban areas of Pakistan anemia in pregnant women has been reported in the range of 29-50%. Studies conducted in some cities of Pakistan; Karachi, Lahore and Multan had reported anemia due to iron deficiency as 64%, 73% and 76% respectively.[20-22]

Clinical measurements are subjective and the chances of error are more as compared to measuring hemoglobin concentration which is a predictable indicator when measuring anemia in the population. Hemoglobin (Hb) levels are proxy indicator for iron deficiency. Measuring Hb is inexpensive and easy[.1] According to WHO the recommended Hemoglobin level, for non-pregnant women (age 15 and over) is 12 gm/dL and for males (15 years and over) it is 13 gm/dL. Anemia is much frequent in reproductive period of women and especially during pregnancy.[23]

In the developing countries like Pakistan, anemia because of iron deficiency during pregnancy is a revealed dilemma.[24] Anemia and associated factors in childbearing age women presenting at teaching public sector hospital of district Gujrat Punjab Pakistan remains a less explored dimension.

MATERIALS AND METHODS

Study Design: Cross-sectional
Study Area: Public Sector Teaching Hospital (Aziz Bhatti Shaheed Teaching Hospital) Gujrat
Study Period: March 2018 till August 2018
Study Population: 150 Women between the ages 16yrs – 50yrs
Sampling Technique: Random sampling **Data Collection Tools:** Structured questionnaire including; Sociodemographic Data (age, education, income, marital status), Diet, Gynecological & Obstetric history, current or history of chronic illness. The questionare was pilot tested before the start of the study
Inclusion Criteria: Women of ages 16 to 50 years presenting in OPD of Medical or Gynecology ward of Aziz Bhatti teaching hospital and consenting to be a part of the study.
Exclusion Criteria: pregnant women and women breast feeding at the time of the study.
Data Analysis: Data analysis was done on Microsoft Excel. Informed conscent and mainatanance of confindentiality was insured at the time of study.

RESULTS

From 150 women selected randomly who fulfilled the inclusion and exclusion criteria it was found that 92% of the women presenting to the public tertiary care hospital were from lower socioeconomic class, 70% were from rural area, 40% were educated and only 6.6 % women fulfilled the satisfactory level of nutrition intake while 60% women had a poor nutritional status.

Table No.1: Demographic, Educational, Nutritional and Socioeconomic Classification of Participants in numbers and percentages.

Characteristics	Group	Number	%age
Residence	Urban	55	30
	Rural	95	70
Educational Status	Educated	60	40
	Uneducated	90	60
Nutritional Status	Satisfactory	10	6.6
	Unsatisfactory	50	33.3
	Poor	90	60
Socioeconomic Status	Upper	00	00
	Middle	12	08
	Lower	138	92

From 150 women 84 (56%) were anemic and 27 % of women were just above the required level of Hemoglobin and were at risk of becoming anemic during pregnancy or any illness or nutritional deficiency.

Table No.2: Percentage of anemic, non anemic and at risk women.

	Number of women	Percentage
Anemic	84	56%
At Risk	40	27%
Normal	26	17%

Amongst the 84 anemic women the following was the distribution of anemia based on Hemoglobin levels ranging from mild to severe anemia. Most of the women 34(41%) of the 84 iron deficient women had moderate anemia.

Table No.3: Percentage of Anemic women by Hemoglobin levels.

Hemoglobin concentration with levels of Anemia	No. of deficient women	Percentage
9.0 – 11.0 g/dL Mild	28	33%
7.0 – 9.0 g/ dL Moderate	34	41%
Below 7.0 g/dL Severe	22	26%

It was also found that amongst the anemic women majority of the females were between 30-40 years of age.
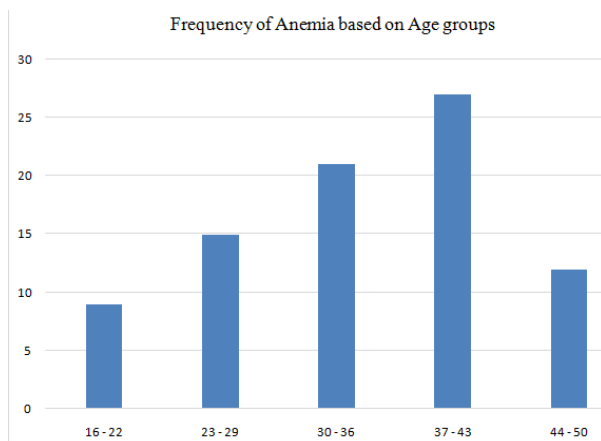
Figure No.1: Number of Anemic women in various age Groups

DISCUSSION

Anemia is a concern for the world as around 25 percent of world population is suffering from it. The major bulk of the affected population is found in the developing and under developed countries. The associated factors of anemia across these countries are common mostly poor socioeconomic status, nutrition and education. Based on the various studies anemia has serious health hazards especially during pregnancy and for the newborn. Developing countries like Pakistan are still off the guards to find a way to overcome such deficiencies. Anemia in Pakistan on an average is around 50-70% across urban and rural area and all socioeconomic groups.

The prevalence of anemia and associated factors in Gujrat were explored in order to understand the recent status. As the study was done in women presenting to public sector hospital more than 90% of these women were from low socioeconomic status and majority 70 % from rural areas. Almost 60 % of these women were uneducated or having education less then primary education (5th grade). Amongst the selected women only 6% knew about and followed a balanced diet in their meals.

As far as anemia in these reproductive age women was concerned more than half (56%) of the women were anemic and 26% of the anemic were severely anemic (below 7gm/dl) with majority being moderately anemic. Most of the women who were anemic were between 30 -45 years of age.

Keeping in view above results it can be inferred that anemia is still a major health issue of Pakistan. The high percentage of anemia in women having access to a tertiary care hospital of a major district having better educational opportunities and health facilities in the province of Punjab having the highest budget.

Studies conducted in Korangi, Karachi, Faisalabad, Bahawalpur also depicted most of anemic women to be from poor educational and economic background. From the studies it is elicited that etiologies remain same over

the decades. The situation in areas with limited access and poor health facilities and education across various provinces of Pakistan may be even worse which need to be explored.

CONCLUSION

The prevelance of anemia in women of childbearing ages is still high in women belonging to rural areas and socoioecomicaly deprived fractions seeking health care from public hospitals. They are more likely to endager themselves and newborn during prospective pregnancies leading to high MMR,Still births & IMR. Emphasis on health education, dietry requirements of women, provision of nutritional supplements and treatment for any illness is mandatory for a healthy mother & children.

Author's Contribution:
Concept & Design of Study: Zahid Azam Chaudry
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