

PREVALENCE OF ANEMIA AMONG PREGNANT WOMEN IN DERNA CITY, LIBYA

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ABSTRACT

Background: Anemia is the commonest medical disorder in pregnancy and severe anemia is associated with poor maternal and perinatal outcome. Anemia in pregnancy is considered as one of the major risk factors for contributing 20-40% of maternal deaths directly or indirectly through cardiac failure, preeclampsia, antepartum hemorrhage, and postpartum hemorrhage. It is one of the most important health problems among women from 18 to 45 years of age in the world. **Materials and Methods:-** The study was conducted on a group of 200 pregnant women at alhrish clinic in Derna city, Libya. Data was collected using a questionnaire to collect data about socio-demographic characteristics obstetric history, and blood samples collected from capillary to investigate Hb level. **Objective:** - to evaluate the prevalence of anemia in pregnant women in Derna city. **Results:** The prevalence of anemia among pregnant women was 54.5%. The higher prevalence of anemia was in the third trimester of pregnancy (80 %) Anemia was more prevalent in pregnant women within age between 31-39 years. The prevalence of mild anemia was high in comparison to the other degrees of anemia (75.2%) **Conclusions:** The prevalence of anemia among pregnant women in Libya is comparable to that considered as a severe public by WHO suggesting anemia among pregnant women is a public health problem in Libya. So, awareness regarding balanced diet, regular antenatal checkups, regular intake of iron and folic acid tablet is highly recommended

KEYWORDS: Anemia, Derna, Libya, Pregnant women, Prevalence.

INTRODUCTION

Anemia is the commonest medical disorder in pregnancy and severe anemia is associated with poor maternal and perinatal outcome. It is one of the most important health problems among women from 18 to 45 years of age in the world. Anemia in pregnancy is considered as one of the major risk factors for contributing 20-40% of maternal deaths directly or indirectly through cardiac failure, preeclampsia, antepartum hemorrhage, postpartum hemorrhage and puerperal sepsis.

It is a major cause of morbidity and mortality; affecting 1.62 billion people, of which 56 million are pregnant women.^[1] According to World Health Organization, anemia in pregnancy (also known as gestational anemia) defined by hemoglobin (Hb) concentration of less than 11.0 g/dl.^[2]

It is classified as mild, moderate and severe according to hemoglobin level.^[2-5]

The prevalence of anemia is 50% in pregnant women and in Libya is 28% which put it among countries with anemic prevalence of moderate public health significance according to WHO classification.^[6,7]

Anemia, specifically iron deficiency anemia early in pregnancy has adverse consequences on pregnancy outcome, including low birth weight, preterm birth, and small-for-gestational age, which are the strongest predictors of perinatal mortality; in severe cases, anemia increases the risk of maternal death at the time of delivery.^[8-11]

The most common anemia are iron-deficiency anemia and folate deficiency megaloblastic anemia. These anemia are more common in women who have inadequate diets and who are not receiving prenatal iron and folate supplements. Other less common causes of acquired anemia in pregnancy are aplastic anemia and hemolytic anemia. In addition, anemia such as thalassemia and sickle cell disease can have an impact on the health of the mother and fetus.

Aim of this study was to evaluate the prevalence of anemia in pregnant women in Derna city.

Materials and methods Study Participant

These comprised pregnant women attending at alhrish clinic from January to April 2019 in Derna city. We excluded participants who had obstetric emergencies,

and those who declined to consent.

Sample Collection and Laboratory Analysis

We collected capillary blood samples by finger pricking with a sterile disposable lancet after careful disinfection with cotton immersed in 70% ethanol. Laboratory investigation to determine Hb levels were determined using sysmex 21 analyzer. A drop of blood was allowed to enter the optical window of the micro cuvette by capillary action. The micro cuvette was placed into the cuvette holder for determination of Hb level, and anemia was considered for Hb levels lower than 11 g/dL. It was further classified according to Hb levels, into mild (Hb levels of 10.1 to 11.0g/dL), moderate (Hb levels of 7.0 to 10g/dL) and severe anemia (Hb levels less than 7.0g/dL).

Socio-Demographic Data

This was collected by directly interviewing pregnant women using a structured questionnaire that included age, marital status, parity.

Data Analysis

Data analysis was performed using SPSS software version 20. Descriptive statistics, including percentage, mean, range, and standard deviations, were calculated for all variables.

Ethical Consideration

Ethics Approval and Consent to Participate

We obtained ethical approval from the research and ethics committee of college of medical technology. We too sought for permission from the Director of allehrish clinic, to enroll participants at allihrish clinic.

RESULTS

Two hundred pregnant women during four month from January to April 2019 were included in this study.

The ages of the pregnant women ranged from 16 to 48 years with a mean age of 30.3 ± 6.2 years. The mean hemoglobin (Hb) level of pregnant women was 10.63 ± 1.43 g/dL (range: 6.00-14.00 g/dL).

From Two hundred pregnant women 109 (54.5 %).

Anemia was observed to be more prevalent in pregnant women within age between 31-34, and 35-39 years as in table (1).

The prevalence of mild, moderate, severe anemia were observed as 75.22%, 22.0%, and 2.75%, respectively as in table (2). Thus, the prevalence of mild anemia was high in comparison to the other degrees of anemia.

Out of 109 pregnant women 17 (15.59 %) was anemic in first trimester About 15 (13.51%) was anemic in second trimester and 12 (13.18 %) was normal, and about 80 (73.89 %) was anemic in third trimester as in table (3).

Overall, mean gestational age was 20.86 ± 10.43 weeks ranged from 12 weeks to 43 weeks. The majority was in the third trimester. Anemia was found to be more prevalent in women during the third trimester 73.89 %. Anemia was studying in relation to gravidity about 37(33.65%) was anemic in primi para and 52(47.27%) was anemic in multi para and 23 (21.10%) was anemic in grand multi para.

The results in our study showed that 47% of pregnancies with parity more than 4 have anemia than other parity. This similar to other studies. Pregnant women with Multipara were likely to had anemia than primigravidae.

Table 1: Distribution of anemia among pregnant women according to age.

Age (years)	Anemic	Nonanemic	%	%
16-23	13	15	12%	16%
31-34	52	32	75%	35%
35-39	35	37	32%	41%
40-48	9	7	8%	8%
Total	109	91		

Table 2: Distribution of anemia among pregnant women according to degree of anemia.

Severity	Frequency	%
mild (9 - ≤ 11)	82	75.22%
moderate (7 - 9)	24	22.01%
severe (< 7)	3	2.75%
Total	109	

Table 3: Distribution of anemia among pregnant women according to gestational age.

Gestational age	Anemia	normal	%
first trimester	17	38	16%
second trimester	12	12	13%
third trimester	80	41	73%
Total	109.	91	

Table 4: Distribution of anemia among pregnant women in relation to gravidity.

Gravidity	Anemic	normal	%	%
Primipara	37	39	33.60	42.8
Multipara	52	43	47.27	47.2
grand multipara	20	9	19.09	9.89
Total	109	91		

DISCUSSION

The early diagnosis of anemia during pregnancy is important to prevent its complications especially maternal and perinatal mortality and morbidity. The aim of the current study was to assess the prevalence of anemia in pregnant women in Derna city, Libya. According to WHO, the estimated prevalence of anemia in pregnant women for the African region is about 55.8% which is near to this study it was 54.5 %, and it is comparable to the prevalence in other regions, as in

Ajman (50%), Macca city (39%), Fayoum city (67.4%), Jordan (56.7%), however, lower prevalence was found in Ethiopia (27.9%).^[12-17]

Out of 109 anemic pregnant women included in this study, 2.75% were severe anemia, 22% were moderate anemia and 75.2% were of mild anemia which represented the majority in this study, with the exception of the study from Egypt, in which the prevalence of moderate anemia was 34%, the other studies showed that the prevalence was in favor of mild severity of anemia, it was 45 % in Ajman, and 55% and 61% for mild anemia in Ethiopia and Nigeria respectively.^[12,14-16] and this according to our result.

In this study the prevalence of anemia was decreased with the increase in the age of pregnant women, similar results were observed in other studies, except for the study from Egypt which showed increasing prevalence of anemia below the age of 20 years and above 30 years¹⁶. it was 41% in this study, 39% in Saudi Arabia, 59% in Ajman and it was 30.7% in Nigeria.^[12,16,18]

In present study, anemia was found to be more prevalent among pregnant women in third trimester (73%). This is in accordance to some other studies, in Egypt, Jordan and Saudi Arabia.^[18-20] This could be attributed to the increased requirements of micronutrients during the last trimester.

The results in our study showed that 52% of pregnancies with parity more than 4 have anemia than other parity. This is similar to other study.^[21] Multiparity may induce anemia by reducing maternal iron reserves at every pregnancy and by causing blood loss at each delivery.

Anemia in pregnant women constitutes the real concern, all conclusion over the world more in developing countries. Varies result in present study has reported variable prevalence rates of anemia in target population. Anemia was related during pregnancy and it varies from 33% to 75% with poor dietary habits especially poor iron intake, in present study frequency was more common in multi gravida ladies (55.2%).

CONCLUSIONS

The prevalence of anemia among pregnant women in Libya is comparable to that considered as a severe public by WHO suggesting anemia among pregnant women is a public health problem in Libya. Nutritional deficiency anemia during pregnancy continues to be a major health problem all over the world. So, awareness regarding balanced diet, regular antenatal checkups, regular intake of iron and folic acid tablet is highly recommended.

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