

Women Perception about Iron Deficiency Anaemia and its Management

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Abstract

Objective: The objective of this study was to assess the awareness of anemia among pregnant anemic patients and identify factors associated with the severity of the disease to facilitate its mitigation and the management of associated complications.

Methodology: This study was conducted in the Department of Obstetrics and Gynaecology, gynae 2 SIMS Lahore from April 2022 to September 2022. A sample size of 180 cases was calculated with a 95% confidence level, 5% margin of error, and an expected percentage of knowledge. Enrollment criteria included 180 females meeting the inclusion criteria. A predesigned questionnaire was employed to evaluate perceptions regarding iron deficiency anemia and its management.

Results: The study revealed a significant gap in awareness regarding iron deficiency anemia among pregnant individuals. Factors associated with disease severity were identified. The calculated incidence of anemia was found to be 23% and 52% in developed and developing countries, respectively.

Conclusion: Timely intervention frameworks and epidemiological insights were highlighted as crucial in addressing the burden of anemia. The study underscores the necessity for health specialists and policymakers to comprehend the heterogeneity of anemia as a unified entity and to initiate health awareness programs and strategies aimed at reducing its prevalence, particularly in current healthcare settings.

Keywords: Iron Deficiency Anaemia, Haematological problems, iron supplementation

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Introduction

Iron deficiency (ID) is most common of all the nutritional deficiencies encountered worldwide. According to one estimate, around 4-6 billion people suffer from iron deficiency anaemia globally.¹ World Health Organization has set cut off limit for anaemia of haemoglobin level less than 11gm/dl in obstetric population however, various physiologic changes of pregnancy including fluid retention and increase in Red blood cells mass demand a more precise definition.² Therefore, American center for disease control and prevention has redefined anaemia as haemoglobin level less than 11gm/dl in first and third trimesters and haemoglobin level less than 10.5gm/dl in second trimester.³ The growing fetus and placenta require increased amount of iron which predispose women to iron deficiency anemia if it is not properly replaced and this usually becomes evident in second half of pregnancy. Women with history of menorrhagia, multiparity, low socioeconomic status and poor dietary intake are at increased risk of iron deficiency.^{4,5} The true incidence of anemia is

difficult to calculate worldwide because of epidemiologic differences. The calculated incidence is 23% and 52% in developed countries and developing countries respectively.

Iron deficiency (ID) was the leading cause of anemia in 2019, with an estimated 1.8 billion people worldwide suffering from the condition.⁶ Interestingly, this number does not account for the large number of ID instances that happen without anemia.⁷ Anemia resulting from this deficiency is the leading cause of disability-adjusted life years among women of reproductive age in low- and middle-income countries.⁸ Women are more vulnerable to ID than males, especially those living in developing countries. 32.5% of women who were not pregnant, 40.1% of pregnant women, and 32.8% of women in the reproductive age range suffered from anemia, according to estimates released by the World Health Organization (WHO) in 2016.⁹

The pathophysiology of anemia can be attributed to multiple risk factors. Decreased amount of haemoglobin is responsible for poor transfer of oxygen to tissues and resulting in fatigue,

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weakness, poor concentration, impaired cognitive performance, preterm labour and low birth weight (10,11). There are increased chances of maternal and perinatal mortality due to heart failure and infection.

The objective of this study was to assess about the awareness of anemia among pregnant anemic patients and the factors associated with severity of the disease so that it can be lowered and the complications associated with this disease can be dealt.

Methodology

This study was conducted in the Department of Obstetrics and Gynaecology, gynae 2 SIMS Lahore. It was Non-probability, consecutive sampling. Duration of study was three months from April 2022 to September 2022. Sample size of 180 cases was calculated with 95% confidence level, 5% margin of error and taking expected percentage of knowledge. Women of age 18-50 years presenting in antenatal outpatient department in second and third trimester of pregnancy were included in this study. Women presented at first booking visit, haemoglobin >11g/dL and multiple gestation were excluded from this study. 180 females fulfilling the inclusion criteria were enrolled in the study. Informed consent was obtained from all women before accrual in the study. Demographic information (name, age and parity) was also obtained. A predesigned Questionnaire evaluated the perception about iron deficiency anaemia and its management.

Results

Table I illustrates the parity distribution among participants, indicating that 32% of females were primigravida, 45% had between 2 to 4 children, and 21% had more than 4 children. Approximately 60% of females had hemoglobin levels ranging from 7 to 10.9g/dL. Regarding menorrhagia, 26% of females reported a history of this condition, while about 9% had experienced antepartum hemorrhage. Forty-three percent of females had undergone deworming in the past, whereas the remainder were unfamiliar with the concept. The majority of females adhered to a vegetarian diet for various reasons. Additionally, more than half of the females were unaware of the optimal timing for iron intake, as depicted in Table I. Fifty-one percent of females were knowledgeable about iron-rich diets, almost all reported experiencing symptoms of anemia such as fatigue, palpitations, and irritability. (Table I)

Discussion

It is very difficult to determine exact prevalence of iron deficiency in pregnancy as it varies at different gestational ages. The noted difference in iron deficiency anemia in developed and developing countries is due to iron supplements, better health care delivery system, educated population and fortification of food with iron.

Table I: Characteristics of Participants in the Study: Parity, Hemoglobin Levels, Obstetric History, and Dietary Practices.

| Parity | | N(%) |
|------------------------------------|--------------|-------------|
| Valid | PG | 59(31.9) |
| | 2-4 | 81(43.8) |
| | >4 | 40(21.6) |
| | Total | 180 (97.3) |
| Anaemia Severity | | |
| Valid | <11g/dL | 48(25.9) |
| | 7-10.9g/dL | 109(58.9) |
| | <7g/dL | 23(12.4) |
| | Total | 180(100.0) |
| Menorrhagia | | |
| Valid | Yes | 48(25.9) |
| | No | 132(71.4) |
| | Total | 180(97.3) |
| APH | | |
| Valid | Yes | 16(8.6) |
| | No | 164(88.6) |
| | Total | 180(97.3) |
| Deworming | | |
| Valid | Yes | 80(43.2) |
| | No | 100(54.1) |
| | Total | 180(97.3) |
| Dietary Habits | | |
| Valid | meat intake | 40(21.6) |
| | Vegetables | 94(50.8) |
| | Pulses | 46(24.9) |
| | Total | 180(97.3) |
| Awareness of timings intake | | |
| Valid | Yes | 83(44.9) |
| | No | 97(52.4) |
| | Total | 180(97.3) |
| Awareness of iron rich diet | | |
| Valid | Yes | 96(51.9) |
| | No | 84(45.4) |
| | Total | 180(97.3) |
| Effect of Anaemia | | |
| Valid | Fatigue | 49(26.5) |
| | Palpation | 69(37.3) |
| | Irritability | 62(33.5) |
| | Total | 180(97.3) |

Women are more vulnerable to anemia at all ages throughout the world. Hookworm infestation as well as dietary intake are among the primary causes of anemia. Most of time among females iron deficiency is the most common form of anemia, it is need of hour to implement such programmes which result in early diagnosis and treatment of chronic haemorrhage and there should be supplementation of food with iron.^{12,13} In countries

where anemia is more prevalent, its etiology is mainly iron related and infectious. Many regions of the world like East, South, and Southeast Asia have reduced anemia prevalence because of early diagnosis and better dietary intake. In countries where gross income is high, anemia burden and its severity is much less as compared to developing countries. As shown in this study, a clear association between anemia with menorrhagia, post- and ante-partum haemorrhage, worm infestation and malnutrition.¹⁴ As shown in this study, Iron deficiency anaemia effect the quality of life as patients presented with fatigue, palpitation and irritability.¹⁶ Disease burden can be reduced after the successful introduction and implementation of programmes regarding prevention.

In Pakistan, strategies should be adopted for anemia surveillance and timely intervention in population which are at increased risk like females and children. Anemia is responsible for various morbid conditions and it has not received much attention in many health sectors. The reason for this negligence can be explained partly that anemia is mostly considered as byproduct of other diseases and timely interventions to correct it are not made. It can be said for development of timely intervention frameworks, epidemiological details are very important. This study helps the health specialists and policymakers to analyze this dichotomy by distilling the heterogeneity of anemia into a single entity and to initiate and promote health awareness programs and strategies to further reduce anemia burden especially in our country, in which anemia prevalence is as high as 50% to 80% with a many 10 to 20% having moderate to severe anemia.¹⁵

Conclusion

This study highlights on the significant gap in awareness regarding iron deficiency anemia among pregnant individuals, highlighting the pressing need for interventions aimed at mitigating its severity and managing associated complications. The findings underscore the importance of timely intervention frameworks and epidemiological insights in addressing the burden of anemia. Crucially, the study emphasizes the necessity for health specialists and policymakers to recognize anemia's heterogeneity as a unified entity and to initiate comprehensive health awareness programs and strategies. Such initiatives are essential for reducing the prevalence of anemia, particularly in regions where its impact is most profound, such as in developing countries like Pakistan. By addressing these issues, we can work towards improving the quality of life for affected individuals and reducing the overall burden of anemia on public health.

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