



IRON DEFICIENCY ANAEMIA - THE PREGNANCY MUST A STUDY ON MATERNAL AND PERINATAL OUTCOME IN SEVERE IRON DEFICIENCY ANAEMIA IN THIRD TRIMESTER OF PREGNANCY

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ABSTRACT:

INTRODUCTION:

Anaemia is a condition in which the number of RBC OR OXYGEN CARRYING CAPACITY is insufficient to meet the physiological needs of the individual .It is a commonest medical disorder in pregnancy & responsible for significant high maternal and fetal mortality rate worldwide.

AIM:

To study socio demographic factors , maternal and fetal outcome.

MATERIALS AND METHODS:

This study included all antenatal women presenting in third trimester of pregnancy with Hb<7 gm/dl over a period of 2 year in the department of OBGY ,GMCH AURANGABAD.Gestational age more than 28 wks and haemoglobin less than 7 g/dl included in this study.

RESULTS:

A total of 200 women were studied .All women were investigated and treated with Injectable iron sucrose and adequate blood transfusion. Maternal complication in terms of CCF ,PPH,Sepsis,Lactational failure ,Surgical site infection were studied. Fetal complication in terms of LBW ,Prematurity,Neonatal sepsis were studied.

CONCLUSION:

The prevalence of IDA and amount of information available regarding the condition is substantial. Iron deficiency anaemia (IDA) is not a disease, but a collection of signs and symptoms that are displayed according to an insufficient amount of iron in the body. IDA prevention is dependant on the early and successful utilization of diagnostic tools and treatment options.

KEY WORDS: Pregnancy, Iron deficiency anaemia, Blood transfusion, PPH

INTRODUCTION:

Anaemia term is derived from the Greek word **anaimia** meaning lack of blood. Anaemia is defined as “Quantitative or qualitative reduction of Haemoglobin or circulating RBCs or both resulting in decreased Oxygen carrying capacity” (2)

Although it is a normal physiological process, it is the time when the nutritional needs of the mother and the fetus must be met through careful choice of foods. Even before pregnancy begins nutrition is the primary factor in the health of mother and baby. Maternal nutritional during pregnancy has a vital influence on long term health aspects of fetus and an important regulator of fetal growth.

The prevalence of maternal anaemia globally has remained high over the past 30 years. Anaemia is perhaps the most common complications during pregnancy seen in developing countries. Anaemia in pregnancy defined as the haemoglobin concentration

In peripheral blood is 11gm/dl. According to Federation of Obstetrics and Gynaecological Societies of India haemoglobin <10gm/dl is considered as anaemia in India. The severe forms of anaemia are as common as toxemia and they contribute to a major percentage of maternal death.

Prevalence of anaemia in South Asian countries is highest in the world. Among the South Asian countries India has the highest prevalence of anaemia. In India anaemia is the second most common cause of maternal death, accounting 20% of the total maternal deaths.

The main causes of anemia in developing countries are iron and other micronutrient deficiencies, malaria, hookworm infestation, diarrhoea, chronic infections, genetic disorders (sickle cell anaemia, thalassemia), blood loss during and after labor, heavy menstrual blood flow and closely spaced pregnancies.

Anaemia can be responsible for adverse obstetric and perinatal outcome in the form of spontaneous abortion, preterm labour, postpartum hemorrhage, puerperal sepsis, maternal death, fetal growth restriction, low birth weight babies leading to increased perinatal morbidity and mortality.

The National Nutritional Anemia Prophylaxis Programme

(NNAPP) was initiated in 1970 with the aim to reduce the prevalence of anemia to 25 percent. In 1992, the daily dosage of

Elemental iron for prophylaxis and therapy has been increased to

100 mg and 200 mg, respectively under Child Survival and Safe

Motherhood (CSSM) programme.⁽⁴⁾

Despite the efforts made by the government and other stakeholders anemia, the scenario has not much changed, anaemia in pregnancy is still a public health problem. Anaemia is not only responsible for increase in maternal and perinatal morbidity and mortality but also severely affects economic and social status of the country.

METHODOLOGY:

This was a prospective observational study done at tertiary care centre after IEC Approval.

All pregnant women with gestational age more than 28 weeks of gestation with Haemoglobin less than 7gm/dl coming to hospital fulfilling the inclusion and exclusion criteria included. Each participant informed about the research objectives, methods and techniques in detail, written informed consent taken from them. Data collected ensuring the privacy and confidentiality by face to face interview. A pretested semi structured questionnaire is used for collecting information on socio demographic characteristics & risk factors of anemia. A detailed history and clinical examination performed. Causes of anaemia identified by doing panel of investigation. The investigations include complete blood count, blood grouping and Rh typing, Peripheral smear examination, Liver function and Renal function test, Reticulocyte count and sickling test, Haemoglobin electrophoresis, (If Mentzer's index is less than 13. Mentzer's index = MCV/RBC count). Urine routine microscopy and culture sensitivity, Stool microscopic examination done. All undelivered patients are followed up till delivery. After delivery maternal and neonatal condition were studied till discharge from hospital.

RESULTS:

Table: 1 Various factors of Iron deficiency anaemia.

Characteristics	No of women
Age group	
18 to 20 yrs	26(13%)
21 to 30 yrs	116(58%)
31 to 40 yrs	58(29%)
Residence	
Rural	136(68%)
Urban	64(32)
Socio economic status	
Upper	4 (2%)
Upper Middle	4(2%)
Lower Middle	74(37%)
Upper lower	96(43%)
Lower	22(11%)
ANC Visits	
Booked	68(34%)
Unbooked	132(66%)
Parity	
Primigravida	36(18%)
Multigravida	164(82%)
Gestational age	
28 to 31.6 wks	40(20%)
32 to 36.6 wks	104(52%)
37 to till delivery	56(28%)

Table 2: Distribution of cases according to Interconceptional period and IFA prophylaxis

Interconceptional period	No of women
6 to 12 months	44(22%)
13 to 24 months	82(41%)
>24 months	38(19%)
IFA Prophylaxis	
Regular	56(28%)
Irregular	122(61%)
Not taken	22(11%)

Table no.3: Distribution of cases according to treatment given at hospital

Treatment given at hospital	No of women
Iron sucrose	78
1 PRBC	58
2 TO 4 PRBC'S	64

Table no.4: Distribution of cases according to Mode of delivery

Mode of delivery	No of women
Preterm vaginal delivery	66(33%)
Full term vaginal delivery	104(52%)
Instrumental delivery	4(2%)
LSCS	26(13%)

Table no.5: Distribution of cases according to Maternal Complications

Complication	No of women
Preterm labor	66(33%)
PPH	20(10%)
Surgical site infection	8(4%)
Lactational failure	8(4%)
Abruption	6(3%)
Puerperal sepsis	4(2%)
Congestive cardiac failure	2(1%)
Maternal mortality	1(0.5%)

Table no.6: Distribution of cases according to Perinatal Complications

Complication	Number
APGAR <4 at 5 min	20(10%)
Preterm	32(16%)
Very low birth weight	36(18%)
IUGR	10(5%)
IUFD	2(1%)
Hyperbilirubinemia	8(4%)

Discussion:

In the present study mean age affected is 25.

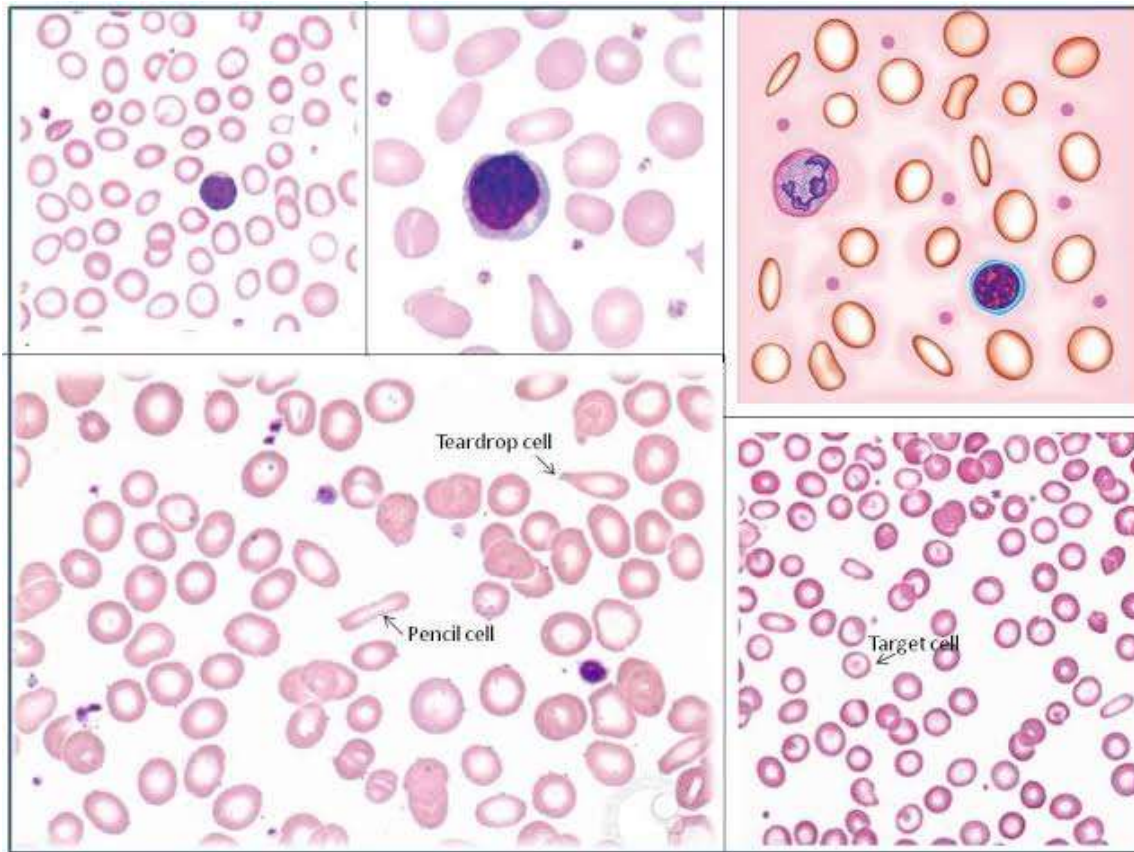
We observed that most of the study cases 116 (58%) were from 20 to 30 years age group. In the similar study done by **Ram hari Ghimire** 67% were from 20 to 30 years age group which was also similar to study conducted by **Rameshwari M Nisty**. In the study conducted by **Juhi Agarwal** 74% from 20 to 30 years age group. In the present study 67% from Rural area which is compared to study conducted by **Juhi Agarwal**.

In the study conducted by **Shalini Singh**, 72.8% from Rural area. More than half study cases (84%) were from upper lower IV group of socio economic status. Low SES is a risk factor for anaemia, poor nutrition being the

main cause. These findings are comparable with those of **Sharda Patra** in whose study 87% of anaemic women belonged to Low SES. In the study conducted by **Shalini Singh** it was (87%). Regular antenatal checkups and adequate antenatal care is the cornerstone for safe motherhood. 68% of the cases in the present study were unbooked. In the study conducted by **Shalini Singh** 84% were unbooked. In the present study anaemia was more common in multigravida. Nearly 67% were Multigravida. In the study conducted by **Ram Hari Ghimire** there were 60.4% Multigravida. In the study conducted by **Shalini Singh**, 60.4% were multigravida.

In present study 63% were conceived again within 2 years, Results of study were comparable with the study conducted by **Sharda Patra**. Close birth spacing had an impact on the haemoglobin status of women. 63% of women in the anaemic group had birth spacing less than 2 years. Preterm deliveries were most common in anaemia, In our study it contributes 33%. C-Section was only 13% which is comparable to study conducted by **Bangal VB**. From our study most common maternal complication preterm labour (33%) followed by PPH which was comparable to conducted by **Rameshwari M Nisty**. In the study conducted by **Shalini Singh** most common complication was preterm labour. Our study is comparable with the study conducted by **Bangal VB**. Most common cause of death is Very LBW with RDS, Sepsis.

PS shows various types of cells



CONCLUSION:

Though anaemia is not a direct cause of maternal morbidity it contributes to many ill effects to maternal health.

Lower socioeconomic class, Multiparity, Short periconceptional period, iron supplementation during pregnancy and meal frequency of the women per day were independent predictors for maternal anemia .

In order to reduce maternal and perinatal morbidity and mortality preventive strategies must be implemented and applied uniformly at all levels in primary, secondary, tertiary health care centres.

Awareness creation and nutrition education on the importance of taking iron supplementation and nutritional counseling on consumption of extra meal and iron rich foods during pregnancy , Injectable form of Iron sucrose and FCM can be give at PHC,RH Level ,minimum 3 times of Hemoglobin estimation during ANC period are recommended to prevent anemia in the pregnant women.

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