

Original article

Study of clinical presentation of iron deficiency anemia : Observational study

DR. Rajashree V.Kubihal , Dr Hangara*

Department of Obstetrics and Gynecology
Gadag Institute of Medical Sciences, Gadag
Corresponding author*

Abstract

Introduction: Anaemia is defined by WHO as Haemoglobin (Hb) less than 11gm% in pregnancy, and is divided into three degrees mild (10 -10.99 gm %), moderate (7.0-9.9 gm %) and severe degree (< 7.0 gm %). Most of the studies have demonstrated a strong association between maternal anaemia and adverse outcome such as low birth weight, preterm delivery and intrauterine growth retardation.

Methodology: The present study was carried out in the Department of Obstetrics and Gynaecology of Gadag Institute of medical sciences Gadag over a period of two y.Total of 1644 pregnant women were screened for anaemia by haemoglobin estimation on OPD/indoor basis. WHO guidelines were used for classification for anaemia. Pregnant women with haemoglobin level below 11 grams /dl were considered as anaemic.

Results: It was observed that, majority (85-95%) of pregnant women with moderate to severe anaemia were symptomatic and they presented with various symptoms and signs of anaemia.

Conclusion:Diagnosis and Management of cases with anaemia i. Clinical presentation-Women with moderate and severe anaemia presented with the symptoms of easy fatigability, breathlessness on exertion, palpitations, giddiness, anorexia, swelling over feet.

Introduction:

Anaemia is defined by WHO as Haemoglobin (Hb) less than 11gm% in pregnancy, and is divided into three degrees mild (10 -10.99 gm %), moderate (7.0-9.9 gm %) and severe degree (< 7.0 gm %).¹ Most of the studies have demonstrated a strong association between maternal anaemia and adverse outcome such as low birth weight, preterm delivery and intrauterine growth retardation.² Iron deficiency anaemia is an important public health problem for pregnant women, living in developing countries, affecting 2/3rd of pregnant women and contributes to maternal morbidity and mortality and to low birth weight.³

Methodology:

The present study was carried out in the Department of Obstetrics and Gynaecology of Gadag Institute of medical sciences Gadag over a period of two y.Total of 1644 pregnant women were screened for anaemia by haemoglobin estimation on OPD/indoor basis. WHO guidelines were used for classification for anaemia. Pregnant women with haemoglobin level below 11 grams /dl were considered as anaemic.

Results:

Table 1- Distribution of anaemia cases as per clinical picture

Symptoms / Signs	Moderate Anaemia(N=76) No (%)	Severe Anaemia (N=74) No (%)
Symptoms		
I-Asymptomatic :	12 (15.78%)	03 (04.05%)
II-Symptoms :		
a) Easy fatigability	32 (42.10%)	58 (78.37%)
b) Breathlessness on exertion	12 (15.78%)	62 (83.78%)
c) Palpitations	11 (14.47%)	34 (45.94%)
d) Headache	03 (03.94%)	12 (16.21%)
e) Cough	03 (03.94%)	06 (08.10%)
f) Giddiness	18 (23.68%)	24 (32.43%)
g) Reduced appetite	15 (19.73%)	37 (50.00%)
h) Swelling over Feet	20 (26.31%)	46 (62.16%)
i) Passing of worms in stool	03 (03.94%)	07 (09.45%)
Signs:		
a) Pallor	51 (67.10%)	74 (100%)
b) Edema	24 (31.57%)	56 (75.67%)
c) Nail changes (Koilo/Platynychia)	02 (02.63%)	14(18.91%)
d) Signs of heart failure	0	04 (05.40%)
e) Cardiomegaly	02 (02.63%)	12(16.21%)
f) IUGR	12 (15.78%)	37 (50.00%)
h) IUFD	0	04 (05.40%)

It was observed that, majority (85-95%) of pregnant women with moderate to severe anaemia were symptomatic and they presented with various symptoms and signs of anaemia.

Discussion:

Diagnosis and Management of cases with anaemia i. Clinical presentation-Women with moderate and severe anaemia presented with the symptoms of easy fatigability, breathlessness on exertion, palpitations, giddiness, anorexia, swelling over feet. The symptoms were more common in women with severe anaemia. Some women presented with the features of cardiac failure. They had symptoms of cough, chest pain, difficulty in breathing and orthopnoea. Majority of the women (85%) with mild to moderate degree of anaemia were asymptomatic. The common signs in anaemic women were presence of pallor in conjunctiva, nail changes in the form of koilonychia and platyonychia. Oedema over feet was seen in 31.57% of moderate anaemia and 75.67% of cases of severe anaemia. There was evidence of growth restriction in 50% cases of severe anaemia and 15.78% cases of moderate anaemia. These women had not gone to any hospital for antenatal check up during index pregnancy. Similar symptomatology and socio demographic picture in anaemic cases was reported by Gautam VP,⁴

Diagnosis-Diagnosis of Iron deficiency anaemia was based on low haemoglobin percentage, peripheral blood smear showing picture of iron deficiency and altered haematological indices such as Mean Corpuscular Volume (MCV), Mean Corpuscular Haemoglobin (MCH) and Mean Corpuscular Haemoglobin Concentration (MCHC). Additional tests like Serum ferritin values could not be estimated due to non affordability by the patients. It was observed that 92% women with moderate to severe anaemia had altered blood indices. The mean values for MCV, MCH and MCHC were 71.50 fl, 22.30 pg and 28.30 g/dl respectively.

Women with moderate to severe anaemia were admitted in the hospital for treatment. Women with moderate anaemia (65.78%) were treated with parenteral iron preparation i.e. intravenous iron sucrose diluted in normal saline. Total iron requirement was calculated from the existing haemoglobin level. Additional 50% iron dose was added to cover up to replenish iron stores. Due to high cost of the iron sucrose injections, 20% cases did not complete the parenteral iron therapy. All cases were discharged with the advice of taking oral iron therapy throughout pregnancy and postpartum period for minimum three months. Except for two cases who complained of transient headache, the intravenous iron sucrose therapy was uneventful and was completed without any major side effects. Cases who presented with severe anaemia were initially treated with blood transfusion and then followed by intravenous iron sucrose infusion in normal saline. Majority of cases of severe anaemia had come near full term or in labour, so were kept in hospital for safe confinement.^{6,7}

Conclusion:

Diagnosis and Management of cases with anaemia i. Clinical presentation-Women with moderate and severe anaemia presented with the symptoms of easy fatigability, breathlessness on exertion, palpitations, giddiness, anorexia, swelling over feet.

References:

1. flussein L. Kidanto, Ingrid Mogren, Gunilla Lindmark, Siriel Massawe, Lennarth Nystrom. Risks for preterm delivery and low birth weight are independently increased by severity of maternal anaemia. South African Med J. 2009; 99(2):98-

2. Rusia 1J, Madan N, Agarwal N, Sikka M, Sood SK. Effect of maternal iron deficiency anaemia on foetal outcome. *Indian J Pathol Microbiol.* 1995; 38:273-9.
3. Umber Jalil Bakhtiar, Yasmeen Khan, Razia Nasar. Relationship between maternal haemoglobin and perinatal outcome. *Rawal Med J.* 2007; 32(2): 102-4.
4. Pasricha SR, Caruana SR, Phuc TQ, Casey GJ, Jolley D, Kingsland S, et al. Anemia, iron deficiency, meat consumption, and hookworm infection in women of reproductive age in northwest Vietnam. *Am J Trop Med Hyg.* 2008 78(3):375- 81.
5. Baig-Ansari N, Badruddin SH, Karmaliani R, Harris H, Jehan I, Pasha O, et al. Anemia prevalence and risk factors in pregnant women in an urban area of Pakistan *Food Nutr Bull*, 2008; 29(2): 132-9.
6. De Benoist B, McLean E, Egli I, Cogswell M. Worldwide prevalence of anaemia 1993-2005, WHO Global Database on Anemia. Geneva: World Health Organization; 2008. p. 21
7. Cohen JH, Flass HD. Haemoglobin correction factors for estimating the prevalence of iron deficiency anaemia in pregnant women residing at high altitudes in Bolivia.” *Pan American journal of Public Health*, December 1999; 6.6; 392-399