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THE STUDY OF DISTRIBUTION OF SEVERITY OF MATERNAL ANAEMIA IN ORISSAN PREGNANT FEMALES

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ABSTRACT: Anaemia being the commonest medical disorder in pregnancy has been shown to be associated with a two-fold risk for preterm delivery and a three-fold risk for low birth-weight as well as maternal mortality. Keeping these facts in view, the present study embodies the observation of 250 cases of maternal anaemia among 400 cases attending labour room of S. C. B. Medical College, Cuttack (Orissa), in which mild anaemia was seen in 23.6% cases, moderate anaemia in 35.2% and severe anaemia in 4% cases. Moderate anaemia is the commonest type of anaemia.

KEYWORDS: Maternal anaemia, Mild anaemia, Moderate anaemia, severe anaemia.

INTRODUCTION: Anaemia in pregnancy has continued to be a global problem associated with increased maternal morbidity and mortality. Anaemia in pregnancy is defined as a condition of low circulating haemoglobin in which the haemoglobin concentration has fallen below a threshold lying at two standard deviations below the median of a healthy population of the same age, sex and stage of pregnancy.¹

WHO definition for diagnosis of anaemia in pregnancy is a haemoglobin concentration of less than 11mg/dl (7.5mmol/l) and a haematocrit of less than 0.33.² Maternal anaemia causes direct as well as indirect, deaths from cardiac failure, hemorrhage, infection and pre-eclampsia.^{3,4} It also increases perinatal mortality and morbidity rates consequent to preterm deliveries, intra-uterine growth retardation, low iron stores, iron deficiency anaemia and cognitive and affective dysfunction in the infant.^{5,6} A number of studies have been done previously on the distribution of severity of maternal anaemia.

The study conducted by Malhotra et al [2002] concluded that mild anaemia fared best in maternal and perinatal outcome. Severe anaemia was associated with increased low birth weight babies, induction rates, operative deliveries and prolonged labour.⁷

In a study conducted by Aimakhu et al [2003], stillbirths occurred more in the moderately anaemic patients. The higher the packed cell volume in labour, the greater the birth weight, better the Apgar scores but the more the blood loss at delivery. The babies of the patients with a normal packed cell volume had better Apgar scores at one minute, which was statistically significant. There was no maternal death.⁸

Keeping these facts in view the present study was conducted in this tertiary care hospital with the objective of finding out the distribution of the severity of maternal anaemia in this part of the country.

MATERIALS AND METHODS:

Source of Data: The present study was carried out in the department of Obstetrics and Gynaecology, SCB Medical College Hospital, Cuttack from 2009 to 2011.

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Inclusion Criteria:

Patients in labour with haemoglobin level of less than 11.0gm / dl.

Exclusion Criteria:

- Patients with haemoglobinopathies.
- Patients with ante-partum haemorrhage, bleeding disorder.
- Pregnancy with bone marrow insufficiency.
- Pregnancy with severe infections.
- Grand multipara.

METHOD OF STUDY: A cross sectional study was conducted on women in labour with Hb <11gm/dl. All patients admitted in labour room had undergone haemoglobin estimation and women with Hb <11gm/dl were recruited in the study after they satisfied the inclusion and exclusion criteria. The written informed consent was taken.

OBSERVATION AND RESULT:

Haemoglobin level (in gms)	No. of cases	Percentage
<7 (Severe)	16	4.0
7 – 9.9 (Moderate)	140	35.2
10 – 10.9 (Mild)	94	23.6
>11 (Normal)	150	37.2

Table 1: Distribution of cases according to haemoglobin level

Out of 400 cases, 150 cases (37.2%) had haemoglobin more than 11. Haemoglobin was less than 7 in 16 cases (4%), 140 cases (35.2%) had haemoglobin between 7-9.9 and 94 cases (23.6%) had haemoglobin between 10 – 10.9.

DISCUSSION: The present study was proposed to find out the distribution of severity of maternal anaemia in this part of the country in women going to labour. In the present study out of 400 cases attending labour room of S. C. B. Medical College, 150 cases (37.2%) had haemoglobin more than 11. Haemoglobin was less than 7 in 16 cases (4%), 140 cases (35.2%) had haemoglobin between 7 – 9.9 and 94 cases (23.6%) had haemoglobin between 10-10.9.

The study includes only cases that were anaemic at the onset of labour as it would have been unethical not to treat the cases to observe the effect of anaemia on pregnancy outcome.

Aimakhu et al (2003) reported 6.6%, 3.8% of mild and moderate anaemia respectively.^[8]

Sharma et al (2003) reported that 89.8% of cases were mildly anaemic and 5.3% were severely affected.⁹

Khosla et al (2002) reported the incidence of severe anaemia to be 7.53%.¹⁰ Bentley and Griffiths (2003) reported that 32.4% cases had mild anaemia, 14.19% had moderate anaemia and 2.2% were severely anaemic.¹¹

Singh et al (2006) reported 13.1% of severe anaemia and 60.1% of moderate anaemia among pregnant women.¹²

Jaleel and Khan (2008) reported the incidence of severe anaemia to be 4.8%.¹³

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Bukar et al (2008) reported 67.4% of mild anaemia, 30.5% of moderate anaemia and 2.1% of severe anaemia.¹⁴

Rasheed et al (2008) reported 25.2% of mild anaemia, 15.7% of moderate anaemia and 2% of severe anaemia.¹⁵ In our study moderate anaemia is more common (35.2%), which is comparable to Bukar et al study.

CONCLUSION: Anaemia during pregnancy continues to be a major health problem in all non-industrialised countries, contributing significantly to high maternal and perinatal mortality and morbidity rates. The present study revealed out of 400 cases, 150 cases (37.2%) had haemoglobin more than 11. Haemoglobin was less than 7 in 16 cases (4%), 140 cases (35.2%) had haemoglobin between 7 – 9.9 and 94 cases (23.6%) had haemoglobin between 10 – 10.9. Severe anaemia is associated with increased low birth weight babies, induction rates, operative deliveries and prolonged labour. Severity of anaemia is a major key factor in influencing the pregnancy outcome. The high risk patients should be identified early and should be advised to have regular ANC and prophylactic iron and folic acid supplementation. Anaemia is a preventable condition, so all pregnant women must be observed and managed with adequate maternal and neonatal intensive care facilities to improve the outcome.

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