

THE STUDY OF PERINATAL OUTCOME OF MATERNAL ANAEMIA AMONG ORISSAN PREGNANT FEMALESRajeshwari K¹, Poornima H. N²**HOW TO CITE THIS ARTICLE:**

Rajeshwari K, Poornima H. N. "The Study of Perinatal Outcome of Maternal Anaemia among Orissan Pregnant Females". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 79, October 01; Page: 13764-13767, DOI: 10.14260/jemds/2015/1964

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 perinatal outcome of 250 cases of maternal anaemia among 400 cases attending labour room of S. C. B. Medical College, Cuttack (Orissa), in which 242 cases (97%) were live birth and 8 cases (3%) were still birth. Perinatal Mortality Rate is 33.05 per 1000 births. Still birth is associated with severe anaemia and it is statistically significant [chi 2=8.5, P <0.001].

KEYWORDS: Maternal anaemia, Perinatal outcome, Severity of 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 11 g/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.⁸

Keeping these facts in view the present study was conducted in this tertiary care hospital with the objective of finding out the perinatal outcome and its relation with 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.

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.

OBSERVATION AND RESULT:

Outcome	No. of Cases	Percentage
Live birth	242	97
Still birth	8	3
Early neonatal death	0	0
PNMR = 33.05 per 1000 births		
Table I: Perinatal outcome among maternal anaemia cases		

Out of 250 cases 242 cases (97%) were live birth and 8 cases (3 %) were still birth. Perinatal Mortality Rate is 33.05 per 1000 births.

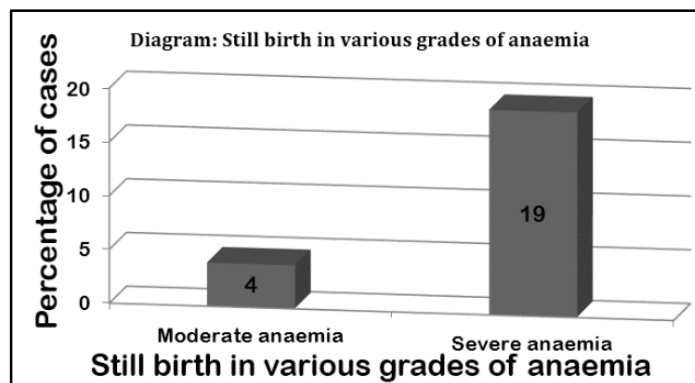
Haemoglobin	Still Birth	
	No. of Cases	Percentage
< 7(Severe)	3	19
7-9.9(Moderate)	5	4
10-10.9 (Mild)	-	-
Table II: Still birth in various grades of anaemia		

As shown in this Table XIV b, still birth occurred in 5 cases (4%) in moderately anaemic women and 3 cases (1%) of still birth occurred in severely anaemic patients and no still births in mildly anaemic women.

Variable	Still Birth	Live Birth	Total
Severe anaemia	3	13	16
Mild & Moderate anaemia	5	229	234
Total	8	242	250
Chi Square Test			

In our study still birth is associated with severe anaemia and it is statistically significant [chi 2=8.5, P <0.001].

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DISCUSSION: The present study was proposed to find out the perinatal outcome with that of the 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, out of 250 cases of maternal anaemia, live birth was seen in 242 cases (97%) and there were 8 cases (3%) of still birth thus the perinatal mortality rate being 33.05 per 1000 live birth. Still birth occurred more in moderately anaemic women (62%) followed by severe anaemia (38%) and no still births in mildly anaemic women. In our study, still birth is associated with severe anaemia and it is statistically significant ($\chi^2=8.5$, degree of freedom 1, $P < 0.001$).

Malhotra et al, (2002) reported that mild anaemia had fair perinatal outcome with no still births and neonatal deaths.^[7]

Aimakhu et al, (2003) reported 96.7% of live births and still births occurred more in moderately anaemic patients. They also showed the perinatal mortality rate to be 33 per 1000 live births which is comparable to our study.⁸

Hinderaker et al, (2004) reported the perinatal mortality rate (PMR) to be 27/1000 births, 56% were stillborn and 44% were early neonatal deaths. There was increased risk of perinatal death among babies with low birth weight.⁹

Ananth et al, (2009) reported the incidence of still birth to be 6.2 per 1000 live birth.¹⁰

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, out of 250 cases of maternal anaemia, live birth was seen in 242 cases (97%) and there were 8 cases (3%) of still birth thus the perinatal mortality rate being 33.05 per 1000 live birth. Still birth occurred more in moderately anaemic women (62%) followed by severe anaemia (38%) and no still births in mildly anaemic women and also still birth is associated with severe anaemia and it is statistically significant ($\chi^2=8.5$, degree of freedom 1, $P < 0.001$).

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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