

**THE STUDY OF DISTRIBUTION OF MATERNAL COMPLICATIONS DURING LABOUR IN RELATION TO SEVERITY OF MATERNAL ANAEMIA AMONG ORISSAN PREGNANT FEMALES**Rajeshwari K<sup>1</sup>, Poornima H. N<sup>2</sup>**HOW TO CITE THIS ARTICLE:**

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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), of which during labour 25 cases (10%) had PPH, 10 cases (4%) had perineal injuries, 2 cases (0.8%) had CCF and there were no case with shock. PPH was seen in 13 cases (81%) of severe anaemia, 7 cases (5%) of moderate anaemia and 5 cases (5%) of mild anaemia. Perineal injuries were seen in 2 cases (13%) of severe anaemia, 5 cases (4%) of moderate anaemia and 3 cases (3%) of mild anaemia. CCF was seen in 2 cases (13%) of severe anaemia and not among cases of mild or moderate anaemia. In our study, PPH is associated with severe anaemia and is statistically significant [ $\chi^2=88.14$ ,  $P < 0.001$ ].

**KEYWORDS:** Maternal anaemia, Mild anaemia, Moderate anaemia, Severe anaemia, Maternal complications.

**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.<sup>1</sup>

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.<sup>2</sup> Maternal anaemia causes direct as well as indirect, deaths from cardiac failure, hemorrhage, infection and pre-eclampsia.<sup>3,4</sup> 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.<sup>5,6</sup> A number of studies have been done previously to analyse the distribution of maternal complications during labour in relation to 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.<sup>7</sup>

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.

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### 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.

**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.

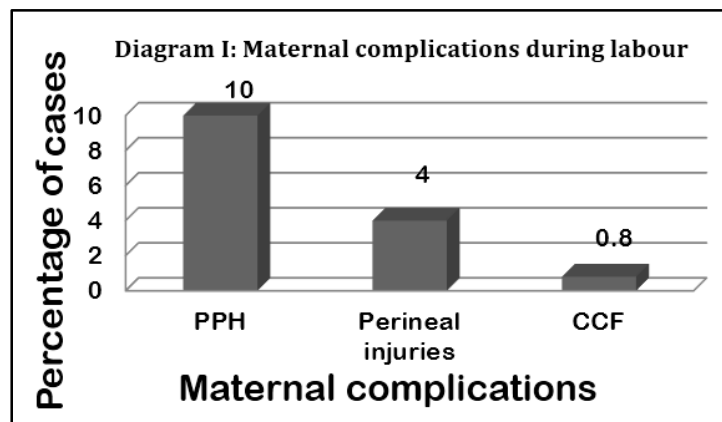
**Method of Study:** A cross sectional study was conducted on women in labour with Hb <11gm/dl. All patients admitted in labour room had undergone haemoglobin estimation and women with Hb <11gm/dl were recruited in the study after they satisfied the inclusion and exclusion criteria. The written informed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

### OBSERVATION AND RESULT:

Complication	No. of Cases	Percentage
PPH	25	10
Perineal injuries	10	4
CCF	2	0.8
Shock	-	-

Table I: Distribution of Maternal complications during labour

During labour 25 cases (10%) had PPH, 10 cases (4%) had perineal injuries, 2 cases (0.8%) had CCF and there were no case with shock.



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Haemoglobin	PPH		Perineal injuries		CCF	
	No. of Cases	Percentage	No. of Cases	Percentage	No. of Cases	Percentage
<7(Severe)	13	81	2	13	2	13
7-9.9 (Moderate)	7	5	5	4	-	-
10 - 10.9 (Mild)	5	5	3	3	-	-
<b>Total</b>	<b>25</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>2</b>	<b>13</b>

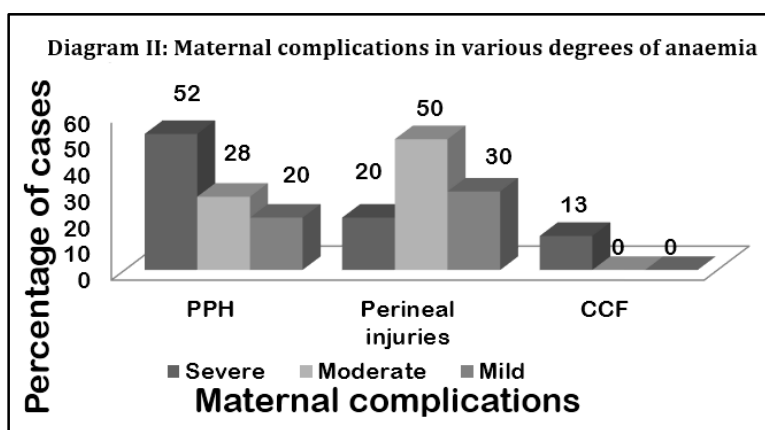
**Table II: Maternal complications in various degrees of maternal anaemia**

PPH was seen in 13 cases (81%) of severe anaemia, 7 cases (5%) of moderate anaemia and 5 cases (5%) of mild anaemia. Perineal injuries were seen in 2 cases (13%) of severe anaemia, 5 cases (4%) of moderate anaemia and 3 cases (3%) of mild anaemia. CCF was seen in 2 cases (13%) of severe anaemia and not among cases of mild or moderate anaemia.

Variable	PPH	Normal	Total
Severe anaemia	13	3	16
Mild & Moderate anaemia	12	222	234
<b>Total</b>	<b>25</b>	<b>225</b>	<b>250</b>

**Chi Square Test**

In our study PPH is associated with severe anaemia and is statistically significant [chi 2=88.14, P < 0.001].



**DISCUSSION:** The present study was proposed to find out the distribution of maternal complications during labour in relation to various degrees 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.

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Out of 250 cases 37 cases (14.8%) had complications during labour (Table I). PPH was seen in 10% cases, 12% had surgical wound infection, 4% had perineal injuries and 0.8% had CCF. Among 25 cases of PPH, 52% of cases were of severe anaemia, 7% were of moderate anaemia and 5% of cases were of mild anaemia. CCF was only seen in 2 cases (13%) of severe anaemia (Table II). In our study PPH is associated with severe anaemia and it is found to be statistically significant ( $\chi^2 = 88.14$ , degree of freedom 1,  $P < 0.001$ ).

Jaleel & Khan (2008) reported 9.8% cases of PPH. The present study is thus comparable.<sup>8</sup>

**CONCLUSION:** Anaemia during pregnancy continues to be a major health problem in all non-industrialised countries, contributing significantly to high maternal mortality and morbidity rates. The present study revealed out of 250 cases with maternal anaemia, during labour 25 cases (10%) had PPH, 10 cases (4%) had perineal injuries, 2 cases (0.8%) had CCF and there were no case with shock. PPH was seen in 13 cases (81%) of severe anaemia, 7 cases (5%) of moderate anaemia and 5 cases (5%) of mild anaemia. Perineal injuries were seen in 2 cases (13%) of severe anaemia, 5 cases (4%) of moderate anaemia and 3 cases (3%) of mild anaemia. CCF was seen in 2 cases (13%) of severe anaemia and not among cases of mild or moderate anaemia. In our study, PPH is associated with severe anaemia and is statistically significant [ $\chi^2 = 88.14$ ,  $P < 0.001$ ]. 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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