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The Study of Distribution of Maternal Anaemia in Women Going to Labour with Respect to Gestational Age in Orissa

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ABSTRACT

Maternal health has a profound influence on the intrauterine growth of the foetus. 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. Anaemia is the commonest medical disorder in pregnancy which 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. The present study conducted on 400 cases of women attending labour room of S. C. B. Medical College, Cuttack (Orissa), to analyse distribution of maternal anaemia with respect to gestational age showed maximum cases of maternal anaemia between 37 – 40 wks of gestational age and also indicated that as gestational age increases the prevalence of anaemia is decreasing in this study.

Key words: Maternal anaemia, distribution, gestational age

INTRODUCTION

Anaemia is the commonest medical disorder in pregnancy and has a varied prevalence, aetiology and degree of severity in different populations [1]. 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 [2].

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 [3]. Out of an estimated 150 million deliveries occurring annually in the world, approximately 600,000 women die from complications of pregnancy and child birth [4, 5]. Anaemia is responsible for 40 – 60% of maternal death in non- industrialised countries. It causes direct as well as indirect, deaths from cardiac failure, hemorrhage, infection and pre-eclampsia [6, 7]. 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 [8, 9].

Keeping these facts in view the present study was conducted in this tertiary care hospital as cases from all the strata of the society come here. The study had the objective of finding out the distribution of maternal anaemia cases with respect to gestational age.

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 11.0 gm / 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 gestational age of women in labour was recorded. The written informed consent was taken.

OBSERVATION AND RESULT

In the present study conducted on a sample of 400 cases attending labour room, the following table shows the distribution of maternal anaemia according to gestational age

Table. Distribution of maternal anaemia cases with respect to gestational age

Gestational age (in weeks)	No. of cases	Percentage
34 – 37	75	30
37 – 40	148	59
>40	27	11

Mean gestational age: 38.02

The table shows that 75 cases (30%) were between 34 – 37 weeks of gestation, 148 cases (59 %) were between 37 – 40 weeks of gestation and 27 cases (11 %) were > 40 weeks of gestation.

As gestational age increases the prevalence of anaemia is decreasing in this study. It was found to be significant [$Z = 2.3, P < 0.05$]

DISCUSSION

The present study was proposed to find out the distribution of maternal anaemia with respect to gestational age in this part of the country in women going to labour. 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.

The present study embodies the observation of 250 cases of maternal anaemia among 400 cases attending labour room of S. C. B. Medical College, in which 30% of cases were between 34 – 37 wks, 59% cases were between 37 – 40 wks and 11% cases were more than 40 wks of gestation.

Aimakhu et al (2003) [10] reported the mean gestational age at booking was 21.3 weeks and at delivery was 38.7 weeks. Mean gestational age in the present study was 38.02, thus comparable. As the gestational age increases the prevalence of anaemia is decreasing in this study and it was found to be statistically significant ($Z = 2.3, P < 0.05$).

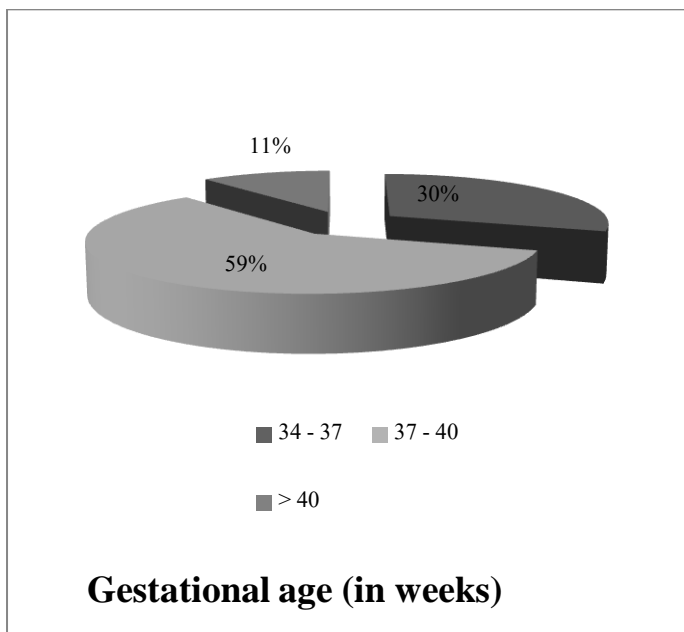


Figure 1. Distribution of maternal anaemia cases with respect to gestational age

CONCLUSION

Nutritional deficiency 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 showed an incidence of 62.5% in which 30% of cases were between 34 – 37 wks, 59% cases were between 37 – 40 wks and 11% cases were more than 40 wks of gestation. Mean gestational age in the present study was 38.02. As the gestational age increases the prevalence of anaemia is decreasing in this study and it was found to be statistically significant ($Z = 2.3, P < 0.05$).

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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