DOI: 10.14260/jemds/2015/1884

ORIGINAL ARTICLE

THE STUDY OF MATERNAL ANAEMIA IN RELATION TO SOCIOECONOMIC STATUS OF WOMEN GOING TO LABOUR IN ORISSA

Rajeshwari K[1], Asma Begum[2]

HOW TO CITE THIS ARTICLE:
Rajeshwari K, Asma Begum. "The Study of Maternal Anaemia in Relation to Socioeconomic Status of Women going to Labour in Orissa". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 75, September 17; Page: 13088-13091, DOI: 10.14260/jemds/2015/1884

ABSTRACT: Socio-economic status is intimately related with the outcome of pregnancy, patient nutritional status and antenatal care. 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 majority of cases 198 (79%) belong to low socio economic status, 48 cases (19%) belong to middle class while 4 cases (2%) belong to upper class. As the socioeconomic status improve, the incidence of anaemia decreases in this study. It was found to be statistically significant [Z =9.14, P<0.05].

KEYWORDS: Maternal anaemia, Socio-economic status.

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 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.[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] 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.[4,5] 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.[6,7]

In developing countries, pregnancy related under nutrition can be attributed to various socio-economical reasons and poor awareness of basic nutritional requirements.[8] A number of studies have been done previously on correlating maternal anaemia with various socioeconomic groups which were Colomer et al [1990],[9] Bentley and Griffiths [2003],[10] Dairo et al (2004),[11] Anorlu et al (2006).[12] Noronha et al (2010).[13]

All of them concluded in their studies that the high prevalence of maternal anaemia was strongly associated with low socioeconomic status. 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 magnitude of the problem in this part of the country in relation to the socioeconomic status they belong to.

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.

DOI: 10.14260/jemds/2015/1884

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 socioeconomic status was determined by taking objective criteria – income, occupation and prestige. The written informed consent was taken.

OBSERVATION AND RESULTS: The table shows the socioeconomic status of cases included in the study. Out of 250 cases 198 cases (79%) were from low socio-economic status, 48 cases (19%) were from middle socio-economic status and 4 cases (2%) were from upper socioeconomic status.

As the socioeconomic status improve the incidence of anaemia decreases in this study. It was found to be statistically significant [Z = 9.14, P < 0.05].

Socio- economic status	No. of cases	Percentage
Lower	198	79
Middle	48	19
Upper	4	2

Table 1: Distribution of cases according to socio-economic status

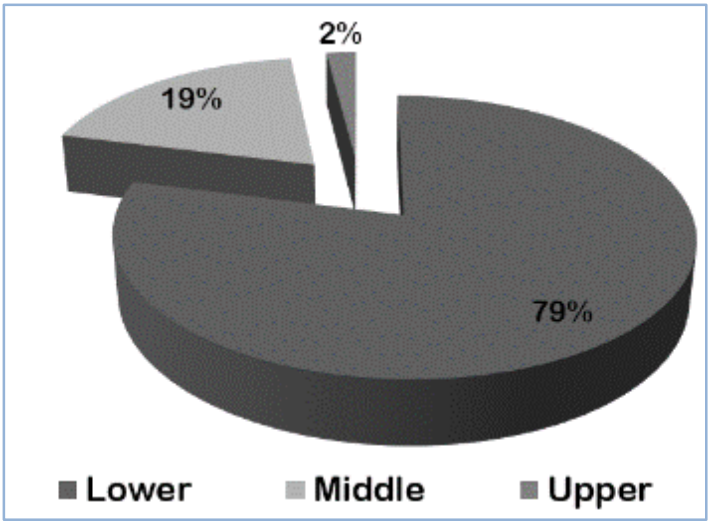

Figure I. Distribution of cases of maternal anaemia according to socio-economic status

DISCUSSION: Socio-economic status is one of the major contributory factors in maintaining the maternal nutrition, providing proper antenatal care and in turn the outcome of pregnancy,. From Table I it is evident that majority of cases 198(79%) belong to low socio economic status, 48 cases (19%) belong to middle class while 4 cases (2%) belong to upper class. As the socioeconomic status improve the incidence of anaemia decreases in this study. It was found to be statistically significant [$Z = 9.14$, $P < 0.05$].

Anorlu et al (2006) reported that anaemia was more common in low socioeconomic status ($chi^2 = 24.67$, $P = 0.00090$).[12]

Noronha et al (2010), in his prospective–retrospective cohort approach, showed that the high prevalence was strongly associated with low socioeconomic status (OR 1.409 [1.048–1.899]; $p<0.023$) which affected their knowledge and health seeking behaviour in both the groups.[13] Bukar et al (2008) reported that majority of women (63.5%) were of low socioeconomic status.[14]

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. India continues to be one of the countries with very high prevalence. The present study indicated that the majority of cases 198(79%) belong to low socio economic status and a statistically significant decrease in the incidence of anaemia as the socioeconomic status improve.

To reduce the prevalence of anaemia women need to have a good formal education, be economically empowered and good antenatal care must be made available, accessible and affordable to all women. 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. In concluding the present study it is important to note that empowering women in terms of education and economic status is the key factor in combating anaemia in pregnancy to prevent the vicious cycle of associated problems.

REFERENCES:

1. Schwartz WJ, Thurnau GR. Iron Deficiency Anaemia in Pregnancy. Clin Obstet Gynecol 1995; 38: 443- 454.
2. WHO/UNICEF/UNU. Indicators for assessing iron deficiency and strategies for its prevention: WHO draft, Geneva. WHO, 1996.
3. WHO, Report of WHO group of experts on Nutritional Anaemias. Technical report series no 503. Geneva WHO1972.
4. Bhatt R. Maternal mortality in India, FOGSI-WHO study. J.Obstet Gynecol India 1997; 47: 207-214.
5. Viteri FE. The consequences of iron deficiency and anaemia in pregnancy. Adv Exp Med Biol 1994; 352: 127 – 139.
6. Prema K, Neela KS, Ramalakshmi BA. Anaemia and adverse obstetric outcome. Nutri Rep Int 1981; 23: 637 – 643.
7. Lozoff B, Jimenez E, Wolf AW. Long term developmental outcome of infants with iron deficiency. N Endl J Med 1992; 325: 687 – 694.
8. United nation standing committee on nutrition (SCN) 2004. Fifth report on the world nutrition situation. Nutrition for improved development outcomes.

9. Colomer, J., Colomer, C., Gutierrez, D., Jubert, A., Nolasco, A., Donat, J., Fernandez-Delgado, R., Donat, F. and Alvarez-Dardet, C. (1990), Anaemia during pregnancy as a risk factor for infant iron deficiency: report from the Valencia Infant Anaemia Cohort (VIAC) study. Paediatric and Perinatal Epidemiology, 4: 196–204. doi: 10.1111/j.1365-3016.1990.tb00638.x.
10. M E Bentley and P L Griffiths. European Journal of Clinical Nutrition (2003) 57, 52–60. doi:10.1038/sj.ejcn.1601504.
11. Dairo MD, Lawoyin TO, Afr J Med Med Sci. 2004 Sep; 33(3):213-7.
12. Anorlu RI, Oluwole AA, Abudu OO. J Obstet Gynaecol. 2006 Nov; 26(8):773-6.
13. Maternal risk factors and anaemia in pregnancy: A prospective retrospective cohort study. J. A. Noronha, A. Bhaduri, H. Vinod Bhat, A. Kamath. February 2010, Vol. 30, No. 2, Pages 132-136.
14. M. Bukar , B. M. Audu, U. R. Yahaya and G. S. Melah. Anaemia in pregnancy at booking in Gombe, North-eastern Nigeria 2008, Vol. 28, No. 8,
Pages 775-778 (doi: 10.1080/01443610802463835).

AUTHORS:

1. Rajeshwari K.
2. Asma Begum

PARTICULARS OF CONTRIBUTORS:

1. Senior Resident, Department of Obstetrics and Gynaecology, Chamarajanagar Institute of Medical Sciences, Chamarajanagar District, Karnataka, India.
2. Senior Resident, Department of Obstetrics and Gynaecology, SCB Medical College, Pondicherry.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Rajeshwari K,
Chamarajanagar Institute of
Medical Sciences, Chamarajanagar.
E-mail: rajik09@yahoo.co.in

FINANCIAL OR OTHER COMPETING INTERESTS: None

Date of Submission: 30/08/2015.
Date of Peer Review: 31/08/2015.
Date of Acceptance: 14/09/2015.
Date of Publishing: 15/09/2015.