OPEN ACCESS
Scholars International Journal of Obstetrics and Gynecology
Abbreviated Key Title: Sch Int J Obstet Gynec
ISSN 2616-8235 (Print) |ISSN 2617-3492 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Original Research Article

A Study on the Incidence of Eclampsia and Factors Influencing Maternal Outcome in Karnataka Population

Hakeem Sayeda Bee Bee Hajira[1*] and Hussain Shaik Imrana[2]

[1]Assistant Professor, Department of Obstetrics and Gynaecology, Fathima Institute of Medical sciences, Kadapa, Andhrapradesh-516003, India
[2]Senior Resident, Department of Obstetrics and Gynaecology, MES Medical College & Hospital, Perinthalmanna, Kerala-679322, India

DOI: 10.36348/sijog.2021.v04i05.009 | **Received:** 12.04.2021 | **Accepted:** 26.05.2021 | **Published:** 30.05.2021

***Corresponding author:** Hakeem Sayeda Bee Bee Hajira

Abstract

Background: Eclampsia is a life-threatening emergency that continues to be a significant cause of maternal mortality worldwide ***Aim:*** To study the incidence of eclampsia and factors influencing maternal outcome in Karnataka population ***Materials and Methods:*** A total of 50 eclampsia cases of > 32 weeks of gestation age utilized for the present study. Patients with medical complications like anaemia, pre-existing hypertensive, diabetes, vascular or renal disease, multiple gestations, and polyhydramnios excluded from the study. The eclamptic management by Zuspan regimen, anti-hypertensive management, and obstetric management by vaginal route or cesarean section was planned for the patients in our study. The mothers followed up for evidence of a decrease in BP followed by other complications of eclampsia for six weeks, and the babies delivered are followed up during the early neonatal period for difficulties in the present study ***Results:*** The majorities of the patients belong to low socio-economic status 94%, belong to middle class 6% in the present study. The Maternal deaths occurred in the low socio-economic group with an incidence of 4.3%. Maternal mortality increases with an increase in the first fit-admission interval was observed in the present study. Maternal mortality was higher in patients with higher Blood Pressure levels at the time of admission. The Incidence of eclampsia was 0.64%, followed by maternal mortality was 0.4% in the present study. The maternal mortality was significantly higher in patients who had six or more episodes of convulsions. The maternal mortality was 10% in convulsion delivery interval >24 hours and 4.2% in convulsion delivery interval were 13-24 hours. Maternal mortality was not observed in convulsion delivery interval <12 hours in the present study. ***Conclusion:*** The incidence of eclampsia is high due to the high referral of eclampsia cases, and reflecting poor antenatal care in the present study suggests that early attention and intensive management are essential for improving the maternal outcome in eclamptic patients.

Keywords: Eclampsia, maternal, mortality.

INTRODUCTION

Eclampsia is a convulsive disease occurring in pregnant, parturient or puerperal women, usually characterized by high blood pressure, albuminuria, oedema, and such symptoms as headache, dizziness, disturbances of vision, epigastric pain, convulsions and coma, sometimes ending fatally [1]. The prevalence and mortality of eclampsia have fallen dramatically over the past five decades due to better antenatal care combined with improved social and economic conditions [2]. The occurrence of eclampsia varies from 0.18% to 4.6% and 75% of cases occur in primigravidas [3]. Maternal mortality and morbidity from eclampsia are very high ranges from 8-14% in India [4, 5]. We have planned to study the incidence of eclampsia and factors influencing maternal outcome in the Karnataka population.

MATERIALS AND METHODS

A total of fifty eclampsia cases (above 32 weeks of gestational age) utilized from the Department of Obstetrics and Gynecology, J.J.M Medical College and Hospital for the present study. Patients with medical complications like anaemia, pre-existing hypertension, diabetes, vascular or renal disease, multiple gestations, and polyhydramnios excluded from the study. We recorded the patient history followed by a general physical examination and systemic examination. The General line of management,

eclamptic management by Zuspan regimen, anti-hypertensive management, and obstetric management by vaginal route or cesarean section planned s in the present study. The mothers followed up for evidence of a decrease in BP followed by other complications of eclampsia for six weeks, and the babies delivered are followed up during the early neonatal period for complications. The present study was in clearance with Human Ethical Committee, J.J.M.Medical College & Hospital, Davangere, Karnataka.

RESULTS

In 50 cases of eclampsia, two maternal deaths occurred (1- pulmonary oedema, 1- acute renal failure) in the present study (Table 1). The majority of cases (48%) have presented more than 6 hours after the onset of convulsions. Maternal mortality increases with an increase in the first fit-admission interval (Table 2). The majority of the patients with low socioeconomic status were 94%, belong to the middle class 6% in the present study. The Maternal deaths occurred in the low socio-economic group, 4.3% (Table 3). Out of 50 cases, 54% were unbooked and 46% booked and 2 (7.3%) maternal deaths occurred in unbooked instances (Table 4). Maternal mortality was higher in patients with higher admission of Blood Pressure (Table 5). In patients below 20 years of age, maternal mortality was 7.1%, and it was 3.3% in the age group below 25 years (Table 6) and indicates that maternal mortality increases to parity. The maternal mortality was 9.1% in Para 1 and above, compared to 2.7% in Nulliparous women (Table 7). The Incidence of eclampsia was 0.64%, followed by maternal mortality was 0.4% in the present study. The maternal mortality was significantly higher in patients with six or more episodes of convulsions (Table 8). The maternal mortality was 10% in convulsion delivery interval >24 hours and 4.2% in convulsion delivery interval were 13-24 hours. Maternal mortality was not observed in convulsion delivery interval <12 hours in the present study (Table 9). The Lower Segmental Caesarean Section has done in 18 patients out of 50 patients in our study. We determined maternal mortality with the duration of labour in 32 patients, and the correlation between duration of labour and maternal mortality was not significant in the present study (Table 10).

Table-1: Patients with Cause of Death in the present study

Cause of Death	No. of Cases	Percentage
Pulmonary oedema	1	50
Acute renal failure	1	50
Total	**2**	**100**

Table-2: Maternal Mortality in Relation to First fit-Admission interval

First fit-Admission interval (hrs)	No. of Cases	Maternal Deaths	Percentage
1-5	24	-	0
6-10	23	2	8.7
>11	3	-	-
Total	**50**	**2**	**4**

Table-3: Maternal Mortality in Relation to Socio-Economic status

Socio-Economic status	No. of Cases	Maternal Deaths	Percentage
Low	47	2	4.3
Middle	3	-	-
Total	**50**	**2**	**4**

Table-4: Maternal Mortality in Relation to Ante Natal Care

ANC	No. of Cases	Maternal Deaths	Percentage
Unbooked	27	2	7.3
Booked	23	-	-
Total	**50**	**2**	**4**

Table-5: Maternal Mortality in Relation to Blood Pressure

Blood Pressure (mm Hg)	No. of Cases	Maternal Deaths	Percentage
<140/90	11	-	-
140/90 - 160/110	17	1	5.9
>160/110	22	1	4.5
Total	**50**	**2**	**4.0**

Table-6: Maternal Mortality in Relation to Age

Age (Yrs)	No. of Cases	Maternal Deaths	Percentage
<20	14	1	7.1
21-25	30	1	3.3
26-30	5	-	-
>30	1	-	-
Total	**50**	**2**	**4.0**

Table-7: Maternal Mortality in Relation to Parity

Parity	No. of Cases	Maternal Deaths	Percentage
Po	17	1	2.7
P1	11	1	9.1
P2	2	-	-
Total	**50**	**2**	**4.0**

Table-8: Maternal Mortality in Relation to Number of Convulsions

No. of Convulsions	No. of Cases	Maternal Deaths	Percentage
1-5	43	-	-
6-10	7	2	28.6
Total	**50**	**2**	**4.0**

Table-9: Maternal Mortality in Relation to Convulsion Delivery Interval

C-D interval (Hrs)	No. of Cases	Maternal Deaths	Percentage
6-12	16	-	-
13-24	24	1	4.2
>24	10	1	10
Total	**50**	**2**	**4.0**

Table-10: Maternal Mortality in Relation to Duration of Labor

Duration of Labor (Hrs)	No. of Cases	Maternal Deaths	Percentage
6-10	17	-	-
10-20	15	2	13.3
Total	**32**	**2**	**6.3**

DISCUSSION

The incidence of eclampsia in the present study is 0.62%. A higher incidence observed compared to western reports. The lack of proper antenatal care and the study conducted in a referral hospital is why there is a higher incidence of eclampsia in our study [4, 6, 7]. The majority of the patients who belong to low-income groups in our study indicate that socioeconomic status, poor nutrition, and inadequate antenatal care have a close relationship with eclampsia and an increase in maternal mortality [8].In the present study, the majority of the women (54%) unbooked. Therefore, maternal mortality in this group was higher. Early detection of pre-eclampsia and its prompt management can reduce the incidence of eclampsia [9]. All patients were hypertensive, had oedema and proteinuria in the present study. Proteinuria is usually a late development in the course of pre-eclampsia. Maximum maternal mortality found when the blood pressure was above 160/110 mm Hg in our study. The systolic blood pressure of more than 200 mm of Hg denotes the severity of eclampsia, and the mortality increases with the severity of eclampsia [10]. Eclampsia cases were more common in the young age group with a primigravida, but maternal mortality was higher in multigravida. The null parity and young maternal age are well-accepted risk factors for eclampsia and not associated with the development of complicated eclampsia [11]. The increased incidence of severe illness in multiparous and older women with eclampsia may be related to the rising prevalence of essential hypertension that occurs with ageing. We observed a statistically significant correlation between maternal mortality and the number of convulsions. Maternal mortality increased with the increase in the duration of labour. Convulsion delivery interval is directly proportional to maternal mortality in our study are in mere agreement with previous literature [3, 12, 13].

CONCLUSION

Early attention and intensive management are essential for improving the maternal outcome in eclamptic patients.

ACKNOWLEDGEMENTS

The authors are also grateful to authors, editors and publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

Conflict of Interest: Nil

REFERENCES

1. Mudaliar AL, and MK Krishna Menon. (1997). Clinical obstetrics India: Orient Longman Ltd, .p. 133-154.
2. Weir RJ. (1998). Hypertension and eclampsia in pregnancy. Chapter-10 in Practical obstetric problems, 5th Ed., Ed. Donald IAN, New Delhi: BI Publications Pvt Ltd, .p. 284-320.
3. Swain S., et al. (1993). Maternal and perinatal mortality due to eclampsia.Indian J Paediat, 30(6): 771-3.
4. Nobis PN. (2002). Maternal outcome in eclampsia. Asian J Obstet Gynaec Practice, 6(1): 25-28.
5. Dutta DC. (1998). Text book of obstetrics. 4th Ed., Calcutta: New Central Book Agency Pvt Ltd, .p. 234-254.
6. Gaddi Suman S, Somegowda. (2007). Factors affecting maternal and perinatal outcome in eclamspia. J Obstet & Gynecol India, 57.
7. Arup Kumar Majhi, Partha Sarathi Chakraborty, Asima Mukhopadhyay. (2001). Eclampsia - present scenerio in a referral medical college hospital. J Obstet Gynaecol India, 51(3):143-47.
8. Silva LM, Coolman M. (2008). Low socio-economic status is a risk factor for preeclampsia; the generation R study. J Hypertension, 26(6).
9. Sibai Baha M, et al. (1981). Eclampsia I. Observations from 67 recent cases. Obstet Gynecol, 58:609-13.
10. Chesley LC. (1978). Hypertensive disorders in pregnancy. New York: Appleton- Century Crofts,.p. 1-628.
11. Agudelo - Agustin Conde and Ana C. Kafury Goeta. (1997). Case – control study of risk factors for complicated eclampsia. Obstet Gynecol, 90:172-5.
12. Kameshwari Devi K, Shameem Sultana and Suresh Rao Santpur. (1976). Review of eclampsia cases (369 cases). J Obstet Gynaecol India, 26: 53-8.
13. Rajesri et al. (2011). Eclampsia and perinatal outcome – A retrospective study in teaching hospital. J of Clinical and Diagnostic Research, 5(5):1056-1059.