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A Study on Factors Affecting the Perinatal Outcome in Eclampsia of the South Indian Population

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Abstract

Background: The common perinatal complications associated with eclampsia are intrauterine death, intrapartum death, neonatal death, neonatal seizures, and prematurity. ***Aim:*** To study the factors affecting perinatal outcome in eclampsia of the south Indian population. ***Materials and Methods*:** 50 eclampsia patients (>32 weeks of gestational age) utilized, and the patients with medical complications like anaemia, diabetes mellitus, hypertension, vascular or renal disease, multiple gestations, and polyhydramnios excluded from the study. The patient history followed by physical examination and systemic examination recorded. ***Results:*** In 50 cases of eclampsia, 12 perinatal deaths occurred, of which five neonatal deaths (41.6%) and the most common cause for the death are prematurity (60%) in the present study. The majority of perinatal deaths observed in the middle socio-economic group population. The perinatal deaths were significantly higher in unbooked cases. Perinatal mortality increases with parity and found statistically significant. Perinatal mortality was significantly higher in < 36 weeks of gestational ages. Perinatal mortality was considerably higher in patients with the blood pressure of more than 160/100 mm of Hg. Perinatal mortality increases with the number of convulsions and found statistically significant. The perinatal mortality was very high in convulsion delivery interval in more than 24 hours, with an incidence of 30%. Perinatal mortality increases with the duration of labour. The perinatal mortality was more in vaginal delivery (34.4%) in the present study. ***Conclusion:*** The better health care facilities, improving socioeconomic status, adequate antenatal supervision will improve perinatal outcome in eclampsia.

Keywords: Antenatal, mortality, neonatal, perinatal.

INTRODUCTION

Eclampsia is an obstetric emergency associated with serious maternal and perinatal complications. The incidence of eclampsia and the total number of deaths from eclampsia have come down dramatically in developed countries. The incidence of eclampsia in India varies from 0.18 to 4.6 % [1]. Perinatal mortality in eclampsia increased due to prematurity, low birth weight, birth asphyxia and intrauterine growth retardation. About 7% of maternal mortality is associated with a hypertensive disorder of pregnancy, particularly eclampsia [2]. Eclampsia is one of the important causes of maternal and perinatal morbidity and mortality. Perinatal mortality varies from 30% to 60% [3]. Perinatal mortality was high in women less than 20 years of age, in primigravidas, preterm babies, and babies with birth weight less than 1000gms[4, 5]. The present study aims to assess the factors affecting perinatal outcome in eclampsia of the south Indian population.

MATERIALS AND METHODS

A total of 50 eclampsia patients (>32 weeks of gestational age) admitted to the Department of Obstetrics and Gynaecology, J.J.M Medical College and Hospital, Davangere utilized to study the factors affecting the perinatal outcome in eclampsia. Patients with medical complications like anaemia, hypertension, diabetes, vascular or renal disease, multiple gestations, and polyhydramnios excluded from the study. The patient history followed by physical examination and systemic examination recorded. The General line of management, eclamptic management by Zuspan regimen, anti-hypertensive management, and obstetric management by vaginal route or caesarean section planned in the present study. The mothers followed up

for evidence of a decrease in blood pressure and other complications of eclampsia for six weeks. All the babies delivered are followed up during the early neonatal period. The current study conducted with prior consent and obtained clearance from the Human Ethical Committee, J.J.M.Medical College & Hospital, Davangere, Karnataka.

RESULTS

In 50 cases of eclampsia, 12 perinatal deaths occurred, of which five neonatal deaths (41.6%) and the most common cause for the death are prematurity (60%) in the present study (Table 1). The majority of perinatal deaths were in the middle socio-economic group, 33.4% (Table 2). The perinatal deaths were significantly higher in unbooked cases (Table 3). Perinatal mortality was 40% in maternal age of < 25 years as against 26.7% when maternal age was <25 years in the present study (Table 4). The Perinatal mortality was 18.9% in primiparous women and 100% in para 2 women observed. Perinatal mortality increases with parity and found statistically significant (Table 5). Perinatal mortality was significantly higher in < 36 weeks of gestational ages (Table 6). Perinatal mortality was significantly higher in patients with the blood pressure of more than 160/100 mm of Hg. The patients were not on any treatment for hypertension during the antenatal period lead to uncontrolled hypertension followed by eclampsia and perinatal mortality (Table 7). Perinatal mortality increases with the number of convulsions and found statistically significant (Table 8). The perinatal mortality was very high in convulsion delivery interval was more than 24 hours with an incidence of 30% (Table 9). Perinatal mortality increases with the duration of labour (Table 10). The perinatal mortality was more in vaginal delivery (34.4%) compared to Lower Segmental Caesarean Section (5.6%) in the present study (Table 11).

Table-1: Causes of neonatal death

Cause of Death	No. of Cases	Percentage
Prematurity	3	60
Septicemia	2	40
Total	**5**	**100**

Table-2: Perinatal Mortality in Relation to Socio-Economic status

Socio-Economic status	No. of Cases	Perinatal Deaths	Percentage
Low	47	11	23.4
Middle	3	1	33.3
Total	**50**	**12**	**24**

Table-3: Perinatal Mortality in Relation to Ante Natal Care

ANC	No. of Cases	Perinatal Deaths	Percentage
Unbooked	27	10	37.0
Booked	23	2	8.7
Total	**50**	**12**	**24**

Table-4: Perinatal Mortality in Relation to Maternal age

Age (Yrs)	No.of Cases	Perinatal Deaths	Percentage
<20	14	2	14.3
21-25	30	8	26.7
26-30	5	2	40.0
>30	1	-	-
Total	**50**	**12**	**24.0**

Table-5: Perinatal Mortality in Relation to Parity

Parity	No. of Cases	Perinatal Deaths	Percentage
Po	37	7	18.9
P1	11	3	27.3
P2	2	2	100
Total	**50**	**12**	**24.0**

Table-6: Perinatal mortality in relation to Gestational age

Gestational age (wks)	No. of cases	Perinatal deaths	Percentage
34 – 36	20	9	45.0
37 and above	30	3	10.0
Total	**50**	**12**	**24.0**

Table-7: Perinatal Mortality in Relation to Blood Pressure

Blood Pressure (mm Hg)	No. of Cases	Perinatal Deaths	Percentage
<140/90	11	1	9.1
140/90 - 160/110	17	3	17.6
>160/110	22	8	36.4
Total	**50**	**12**	**24.0**

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

No. of Convulsions	No. of Cases	Perinatal Deaths	Percentage
1-5	43	5	11.6
6-10	7	7	100
Total	**50**	**12**	**24.0**

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

C-D interval (Hrs)	No. of Cases	Perinatal Deaths	Percentage
6-12	16	3	18.8
13-24	24	6	25.0
>24	10	3	30.0
Total	**50**	**12**	**24.0**

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

Duration of Labor (Hrs)	No. of Cases	Perinatal Deaths	Percentage
6-10	17	5	29.4
10-20	15	7	42.9
Total	**32**	**12**	**37.5**

Table-11: Perinatal mortality in relation to mode of delivery

Mode of Delivery	No. of Cases	Perinatal Deaths	%
Vaginal	32	11	34.4
LSCS	18	1	5.6
Total	**50**	**12**	**24.0**

DISCUSSION

The occurrence of eclampsia in the present study is 0.62%, and the perinatal mortality is 24% observed in our study. The most common cause of perinatal mortality is prematurity. The lack of antenatal care and the conduction of study in a referral hospital leads to a higher incidence of perinatal mortality [6, 7]. The majority of the perinatal deaths in middle-income groups indicate that socioeconomic status, poor nutrition, and inadequate antenatal care have a close relationship with eclampsia and a significant increase in perinatal mortality [8]. The perinatal deaths were significantly higher in unbooked cases, suggesting reduced higher perinatal mortality by early detection of eclampsia and its prompt management [9]. 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. The perinatal mortality was higher (70.6%) in less than 36 weeks gestational age and statistically significant. Prematurity is the leading cause of high perinatal mortality. The results are in agreement with previous literature [10]. Perinatal mortality found in 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 perinatal mortality increases with the severity of eclampsia [11]. The perinatal mortality increased with the increase in the duration of labour. Convulsion delivery interval is directly proportional to perinatal deaths in our study are in mere agreement with previous literature [12, 13]. Antepartum eclampsia with gestational age less than 36 weeks, BP >160/100, preterm birth, low birth weight babies, low Apgar scores influenced the adverse perinatal outcome in our study agree with previous literature [5, 14, 15].

CONCLUSION

Providing better health care facilities, improving socioeconomic status, adequate antenatal supervision, timely identification of high-risk cases, and timely intervention will improve perinatal outcome in eclampsia.

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