

Original Research Article


Clinical study of maternal and perinatal outcome in eclampsia

Timmasarathi Kanaka Durga^{1*}, C Amulya², Subashini³, Rajini Kumari⁴, Sharmila Kumari⁵

¹Postgraduate, ²Professor, ³Associate Professor, ^{4,5}Assistant Professor

Department of OBG, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India

*Corresponding author email: doctordurga828@gmail.com

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Abstract

Introduction: Eclampsia is an acute life-threatening complication of pregnancy, it contribute to a maternal and perinatal morbidity and mortality in developing countries like India.

Aim: To study the maternal and perinatal outcomes among eclamptic patients admitted in Department of Obstetrics and Gynecology, Andhra Medical College.

Materials and methods: The prospective study was carried on 98 pregnant women admitted with eclampsia during January 2019 to December 2019. We included women presented with eclampsia or developed eclampsia during hospital stay.

Results: This study showed 98 eclampsia cases out of a total of 7,044 deliveries in our hospital, it is more common in age group belongs to 20 – 25 years age group (60%) and primigravida (66.4%), majority of the cases were un-booked (88%), 53% cases with gestational age >36 weeks and antepartum eclampsia 69 (70.4%) and 11 maternal deaths mainly due to pulmonary edema, perinatal mortality was 29.4% mainly due to respiratory distress syndrome

Conclusion: Eclampsia is one of most important and common obstetric emergencies which has significant maternal and perinatal outcome. Good and regular antenatal care with emphasis on appropriate health education of pregnant mothers, improvement of socioeconomic conditions and spreading of awareness in the community early diagnosis of pre-eclampsia and timely intervention with prompt treatment, early referral and judicious termination of pregnancy may help in reducing maternal and perinatal outcome.

Key words

Eclampsia, Maternal mortality, Perinatal morbidity.

Introduction

Varadaeus coined the term eclampsia, is derived from a Greek word, meaning is 'like a flash of lighting'.

Eclampsia is most common in young primigravida and in last trimester. It remains a leading cause of maternal morbidity and mortality in the developing countries, and it affects both the mother and the fetus.

Eclampsia was found to be third among the direct obstetric causes of maternal mortality. Deaths due to eclampsia are secondary to preventable factors like cerebrovascular hemorrhage, Acute Renal Failure (ARF), coagulation failure, aspiration pneumonia, pulmonary edema, Ante Partum Hemorrhage (APH) or Postpartum Hemorrhage (PPH) [1].

Eclampsia cause severe maternal and perinatal complications [2]. The definitive treatment for eclampsia is understood to be termination of pregnancy. Even though a certain percentage of these women do come with spontaneous labour, majority require some form of labour induction. In developed countries perinatal mortality is 5-11% and in developing countries it is as high as 40% [3, 4].

The universally accepted drug of choice being MgSO₄ following which due attention must be given to control high blood pressure. The purpose of my study is to evaluate the incidence of eclampsia, maternal and perinatal outcome.

Aim

- To study maternal and perinatal outcome among eclamptic patient admitted in department of Obstetrics and Gynecology, Andhra Medical College.

Materials and methods

Location: The study was conducted in Department of Obstetrics and Gynecology in Andhra Medical College.

Duration: January 2019 to December 2019.

Study design: It was a prospective study in which women who presented as eclampsia or developed eclampsia during hospital stay were included.

Total 98 cases of eclampsia were diagnosed during the defined time period and were studied. All babies delivered of the eclamptic patients or admitted after delivery in case of postpartum eclampsia were also included in the study. The detail history was taken for all the cases from the time of antenatal registration.

Data were collected on ante partum and intrapartum care, BP at admission, presence or absence of proteinuria at admission by dipstick method, eclamptic episode, timing of initiation of adequate treatment, onset of fit and delivery interval, time taken to reach adequate health care facility, treatment given before referral of the patients from peripheral center, timing of Onset of seizures in relation to delivery i.e. ante partum, intrapartum or postpartum, total number of seizures.

Thorough clinical examination was done including general, obstetric, ultrasound examination and laboratory investigations included were complete blood count, renal functional test and liver functional test and lactate dehydrogenase.

Obstetric management was carried out with Mgso₄ was the drug of choice for controlling convulsions. Blood pressure was controlled by oral nifedipine and labetalol.

Inclusion criteria

- Primigravida and multigravida
- Antepartum, Intrapartum, Postpartum.

Exclusion criteria

- Patients with epilepsy / other cause of seizures.

Results

Among 98 cases majority of them were primigravida (**Table – 1**). Most of them belonged

to age group of 21 - 25 years (**Table – 2**). Most of the cases were unbooked 88 (89.7%) from CHC and directly from home (**Table – 3**). Most of the eclampsia were near to term >36 weeks of gestation age (**Table – 4**).

Table - 1: Parity.

Parity	No. of cases	Percentage
Primigravida	65	66.6
Multigravida	33	33.4

Table - 2: Age distribution.

Age (Years)	No. of cases	Percentage
>20	25	25.5
21-25	51	52
26-30	15	15.3
>30	7	7.2

Table – 3: Antenatal care.

	No. of cases	Percentage
Un booked	88	89.7
booked	10	10.3

Table – 4: Gestational age.

Gestational age	No. of cases	Percentage
>28-32	20	20.4
33-36	25	25.5
>36	53	54.1

Table – 5: Type of eclampsia and its outcome.

	No. of cases	Percentage
Ante natal	69	70.4
Intra natal	21	21.4
Postnatal	8	8.2

Table – 6: Mode of delivery.

	No. of cases	Percentage
Vaginal deliveries	61	62.3
LSCS	37	37.7

Majority of cases were antepartum eclampsia (**Table – 5**). Mode of delivery was as per **Table – 6**. Indications for LSCS were as per **Table – 7**. Maternal complications were as per **Table – 8**. In low birth weight babies, perinatal mortality was high (**Table – 9**).

Table – 7: Indication for LSCS.

Indication	No. of cases	Percentage
Unfavorable cervix with failed induction	31	31.6
Fetal distress	10	10.2
IUGR with abnormal Doppler	5	5.1
Malpresentation	2	2.04
Multiple gestation	1	1.02
APH	4	4.08
Precious pregnancy	1	1.02
Obstructed Labour	4	4.08

Table – 8: Maternal complications.

Maternal complications	No. of cases	Percentages
HELLP	16	16.3
ARF	7	7.14
ABRUPTIO PLACENTA	6	6.12
Cerebral Hemorrhage	5	5.10
Pulmonary edema	8	8.89
Respiratory failure	4	4.44
Coma	3	3.06
PPH	6	6.12
Shock	9	9.18
Death	11	11.22

Table – 9: Birth weight.

Birth weight	No. of cases	Percentages
<2 kg	23	23.4
2-2.4 kg	41	41.9
2.5-3 kg	27	27.5
3-3.5 kg	7	7.2

Table – 10: Fetal outcome.

	No. of cases	Percentage
Live births	70	71.4
Still births	8	8.1
Neonatal deaths	11	11.2
IUDS	9	9.1

Fetal outcome was as per **Table – 10**. Major complication in eclampsia was RDS (**Table – 11**).

Table – 11: Causes of perinatal morbidity.

Causes	No. of cases	Percentages
Birth asphyxia	9	9.1
Jaundice	12	12.2
RDS	17	17.3
Neonatal convulsions	5	5.1
Meconium aspiration	11	11.22
Prematurity	28	28.57

Discussion

Eclampsia to be major worldwide health problem running an increased risk of perinatal and maternal morbidity [5].

Our study indicated that one of the major contributors to the poor outcome may be the inadequate care provided to the pregnant women. In the present study, eclampsia was more common in primigravida and age group of 21-25 years (51%), while in less than 20 years (25.5%).

Eclampsia was more prevalent in unbooked cases i.e. 88 cases (89.7%). A finding that correlates with the study done by Shaikh S, et al. [6] who had 82% patients un booked/transferred, referred from other peripheral centers most of pregnant women did not have regular antenatal checkups before the onset of fit, failure to detect preeclampsia at peripheral centers other factors contributing to eclampsia related outcome is poor and often inadequate management given at the peripheral centers.

Mgso₄ is given in inadequate doses as indicated from the referral papers.

Moreover there seems to be a failure to recognize and manage complications associated with eclampsia at peripheral centers.

Many of the patients were critically ill on arrival at the critical care centers and most of them are un booked most of the eclampsia were near to term >36weeks of gestation age 54.1% and 25.5% were seen in 33-36 weeks of gestation

which is nearly similar to study done by Sunita, et al. (2013) [7].

In our study majority of eclampsia cases were antepartum 69 cases (79.4%), 21.4% and 8.2% intrapartum and postpartum period respectively which is similar to with the study of Sibai [8] and Edgar M Ndaboine, et al. [9] (**Table – 12**). The rate of preterm infants and small for gestational age is common in eclampsia patients which is similar in my study.

Table – 12: Comparison with other studies.

Study	Ante partum	Intra partum	Post partum
Sibai [7], 2005	38-50%	18-36%	5-35%
Edgar M Ndaboine [8], 2012	67.4%	22.37%	16.53%
Present Study	79.4	21.4	8.2

Perinatal mortality depends on gestation age, birth weight, prematurity, IUGR, birth asphyxia which was similar to the study done by MacKay, et al. [10].

The perinatal mortality in this study is 19.8 % which is similar to studies from Tanzania, Benin & Eastern India [4, 11], perinatal mortality is high due to delays in referral, increased onset of fit to delivery interval, presence of multiple co morbid complications.

Conclusion

It can be concluded that better ante natal care, early recognition of disease and its complication timely intervention with good obstetric care Eclampsia is a preventable complication of preeclampsia so early identification of risk factors initiation of treatment early referral to high centers with good ventilatory support and dialysis reduces maternal morbidity and mortality and better new born care also reduces perinatal complication.

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