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Original Research Article

## Clinical study of post partum eclampsia in a tertiary care hospital

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### ABSTRACT

**Background:** The study was done to analyze epidemiological factors associated with postpartum eclampsia and to assess the maternal outcome.

**Methods:** This is a retrospective study done in a tertiary care hospital, Govt. Mohan Kumaramangalam Medical College Hospital, Salem, Tamil Nadu between Jan 2015 to Dec 2015. Case records of all the postpartum eclampsia patients admitted during this period were analyzed.

**Results:** This study showed that the incidence of postpartum eclampsia in our hospital was 9.3 per 1000 deliveries. It is more common in the age group of 21 - 25 years (52%) and frequent occurrence in primi para (50.7%). Commonest mode of delivery was vaginal route (63%). The occurrences of seizures were common between 48 hours to 7 days (30.7%). The mortality was 6 (10.7%) out of 56 maternal deaths that occurred during the study period.

**Conclusions:** Postpartum eclampsia is still one of the most common obstetric emergencies which have a significant role in maternal mortality. Regular antenatal care alone is not enough; they also need regular postnatal follow up care and health education.

**Keywords:** Postpartum eclampsia, Maternal mortality, CVT

### INTRODUCTION

Postpartum eclampsia is defined as the development of seizures during puerperium that cannot be attributed to any other cause.<sup>1</sup> It is mostly sudden because of its ill understood etiology and most of the time not associated with prodromal symptoms. With improvement in antenatal care and intervention definitely there is a reduction in the AP eclampsia. In AP eclampsia timely intervention with MgSO<sub>4</sub> at the PHC level has reduced the morbidity and mortality. But the same degree of vigilance and surveillance is not being followed after delivery. Postpartum eclampsia is potentially tragic complication as AP eclampsia and hence follows up of all delivered patients whether they had preeclampsia in antenatal period or not remains the corner stone in

preventing postpartum eclampsia. Incidence of hypertensive disorders in India is found to be increasing as observed by the maternal eclampsia registry.<sup>2</sup> This study is done to assess the problem of postpartum eclampsia in our population and ways to prevent them as this contributes significantly to maternal mortality.

### METHODS

This is retrospective study of all postpartum eclampsia patients admitted between Jan 2015 to Dec 2015 in the Department of O and G, Govt. Mohan Kumaramangalam Medical College Hospital, Salem, Tamil Nadu. All the required data were collected from MRD. The following epidemiological factors were observed like age, parity,

pre-existing hypertension (or) eclampsia, mode of delivery, recurrence of seizure and maternal outcome.

## RESULTS

During the study period for 6976 deliveries 65 cases were admitted with postpartum eclampsia. So the incidence was 0.9%. Postpartum eclampsia was more common in the age group of 21 - 25 (52%). Most of the postpartum eclampsia occurred in primi para (51%). Only 4.6% (3) of patients had prior AP eclampsia and 20% (13) had preeclampsia prior to postpartum eclampsia. Regarding the mode of delivery majority of patients had vaginal delivery 41 (63%). 6 cases (9%) of postpartum eclampsia delivered in our institutions whereas, 59 cases (91%) were delivered in other institutions and referred here as postpartum eclampsia. 6% were referred from Primary Health Centre, 80% were referred from Government Hospitals, 13% from other medical colleges. 16 (24.6%) patients had seizures in less than 48 hours. 20 (30.7%) patients had seizures between 48 hours to 7 days. 16 (24.6%) patients had seizures between 8 to 14 days and 13 cases (20%) had seizures after 14 days. 84.6% of patients belong to rural areas. 18 cases (27.6%) had headache prior to seizures. 14 cases (21.5%) had vomiting prior to seizures. Although all patients received MgSO<sub>4</sub>, the recurrent rate of seizures was 4.6%. None of the patients developed MgSO<sub>4</sub> toxicity. Cases who were diagnosed to have CVT were put on phenytoin, antiedema measures and anticoagulants.

**Table 1: Age distribution.**

Age in years	Percentage
< 20	20%
21-25	52%
26-30	25%
30-35	3%

**Table 2: Parity.**

Parity	Percentage
Para 1	50.7%
Para 2	32.3%
Para 3	15.5%
Para 4	1.5%

**Table 3: Habitat.**

Habitat	Percentage
Urban	15.3%
Rural	84.7%

**Table 4: Mode of delivery.**

Route of delivery	Percentage
Vaginal	63%
LSCS	37%

Anemia was a significant co-morbid factor and was associated in 16 cases (24.6%). Among 65 patients 15.3% had PRES and 10.7% had CVT and 74% had normal CT and MRI findings.

**Table 5: Referral.**

Referral	Percentage
PHC	6.7%
GH	80%
Medical College	13.3%

**Table 6: Timing of seizures.**

Occurrence of Seizure	Timing	Percentage
Less than 48 hours (24%)	<12 hours	12%
	12-24 hours	6%
	24-48 hours	6%
48 hours- 7 days		30.7%
8-14 days		24.6%
>14 days		20%

## DISCUSSION

During our study period 59.4% cases had AP eclampsia among total eclampsia cases which had a similar observation in a study done by Hemkanta et al.<sup>3</sup> Recent years have shown an increased in the incidence of postpartum eclampsia probably due to better prenatal care and prophylactic use of MgSO<sub>4</sub> in severe preeclampsia, AP eclampsia and IP eclampsia.<sup>4</sup> In a study by Chames et al, who found with improvement in antenatal care, early deduction of preeclampsia and prophylactic use of MgSO<sub>4</sub>, there has been increasing shift in the incidence of eclampsia towards the postpartum period.<sup>5</sup> Sibai et al reported 18.25% postpartum eclampsia cases whereas in our study we had 35% postpartum eclampsia.<sup>6</sup> This 35% of postpartum eclampsia is comparable to study done by S. K. Rath et al and Chames et al.<sup>5,7</sup>

The incidence of postpartum eclampsia 0.9 per 1000 maternities in our study whereas in the study done by Kayem et al the incidence was very low (0.1 per 1000 maternities).<sup>8</sup>

Among the women with postpartum eclampsia 12% (n=8) of women had seizures <12 hours following delivery, whereas in study done by Kayem et al it is very high as high as 70%.<sup>8</sup> Most of the women had seizures 48 hours after delivery (75.4%) which is comparable with the study done by Chames et al in which the incidence is 79%. 20% of patients were previously diagnosed to have preeclampsia in our study which is comparable to the study done by Chames et al.<sup>5</sup> In our study 27.6% had headache and 21.5% had vomiting prior to seizure whereas in the study done by Chames et al the incidence of prodromal symptoms were very high.<sup>5</sup> The percentage of CVT is 10% which is also very high when compared to the study done by Runjun Doley et al. The maternal

mortality was 6 (10.7%) out of 56 deaths that occurred in that year.<sup>10</sup> Out of the 6 deaths, 1 had normal CT/MRI and rest of them had CVT.

## CONCLUSION

Currently because of the assess to AN care has improved, the overt cases of preeclampsia are identified early and treated. This could be the reason for the decrease in AP eclampsia and the rising trend in postpartum eclampsia. Conventionally it is said that postpartum eclampsia usually occurs in <48 hours. But it is proved beyond doubt that it is not so, as seen in our study that timing of seizures ranges throughout the puerperal period. In our study there was 1 patient who had seizures at 32<sup>nd</sup> postpartum day. Vigilance and intense surveillance during postpartum period has to be done to reduce postpartum eclampsia. Health educations regarding the prodromal warning symptoms have to be stressed upon to all postpartum women and peripheral health care providers. In our part of the society drinking water in the postnatal period considered as a taboo, so many women consume very little water which may also be a contributing factor leading to an increase in postpartum eclampsia. Regarding this health education should be given to all women during the antenatal period itself. Postpartum eclampsia is still on the most common obstetric emergency which has a significant role in maternal mortality. Excellent antenatal care in our part of the county has resulted in shift of eclampsia towards the postpartum period. Hence regular antenatal care alone is not enough, they also need to regular postnatal follow up care throughout puerperium.

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