



MATERNAL OUTCOME IN PREGNANCY INDUCED SEVERE HYPERTENSION WITH IMMINENT ECLAMPSIA OR ECLAMPSIA

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ABSTRACT

Objectives: Aim of our study was to determine maternal morbidity and mortality and clinical profile in pregnancy induced severe hypertension with imminent eclampsia and eclampsia. **Methodology:** A Prospective observational study was conducted collecting data from medical records of around 61 consecutive consenting subjects admitted in a tertiary health care centre of south Gujarat over a period of July 2021 to June 2022 after HREC approval. **Results:** In our study 32 (52.60%) subjects were referred to our hospital. Headache (81.97%) was commonest premonitory symptom. majority(85%) of the patients presented in their antenatal period and primipara status was commonest (70.31%). On examination of the patients (72.13%) had pedal edema. Out of 61 patients 51 (83.60%) patients had prevented further convulsion with mgso4 and 72.5% patients had controlled hypertension with labetalol. Maximum (95.08%)of the patients had hospital stay of >5 days. Lscs was commonest mode of delivery with (85%) of the patient. Most of the patients(71.93%) had admission-delivery duration <6 hours. Majority (95.08%) of the patients had OBICU admission in our study. **Conclusion:** Imminent eclampsia and eclampsia associated with higher maternal morbidity and mortality. Improving early registration in 1st trimester, frequent antenatal visits, correction of anaemia, identifying and treating cases of pre-eclampsia can reduce the occurrence of eclampsia. We cannot prevent pathophysiology of pre-eclampsia but we can prevent eclampsia by early diagnosis and treatment of the same.

KEYWORDS :

INTRODUCTION

Eclampsia is best regarded as a complication of hypertensive disorders of pregnancy. Eclampsia is characterised by new onset of focal or multifocal tonic-clonic convulsion or coma in pregnancy or postpartum, unrelated to other cerebral condition or drug use, in patient with signs and symptoms of preeclampsia. Severe pre-eclampsia with premonitory symptoms [like headache ,blurring of vision, epigastric pain/tenderness, nausea and vomiting] is known as Imminent [Impending] eclampsia.^[1,2]

Eclampsia is an emergency condition, requiring immediate diagnosis and treatment. Patients of eclampsia usually has hypertension, proteinuria and convulsion of unknown aetiology.^[3,4,5] Eclampsia is the life-threatening obstetric complication. In most of the cases, there are warning signs and they are through pre-eclamptic phase of hypertension. It is now well accepted that proteinuria and hypertension occur as a result of extensive endothelial damage. Preeclampsia is pregnancy specific syndrome that can affect virtually every organ.

In most of the cases, the outcome of delivery depends on frequency, duration & number of convulsions, gestational age, parity and age of the patient. We can prevent episodes of convulsions by early administration of MgSo₄ as an anticonvulsant. Around 15% of all pregnant women develops potentially life-threatening complications and require emergency skilled obstetric care.^[6,7]

MATERIALS AND METHODOLOGY

METHODOLOGY

This prospective observational study was done at Obstetrics and Gynaecology Department in tertiary health care Centre of south Gujarat over 1 year period after obtaining approval from Ethical committee.

Number Of Patients

All consecutive consenting women having imminent

eclampsia or eclampsia in antenatal, Intranatal and postnatal period admitted (Approx 30-40 patients) to obstetrics department of tertiary care hospital will be enrolled in this study after permission from ethical committee at tertiary health care Centre of South Gujarat.

Inclusion Criteria

All antenatal, Intranatal and postnatal women having imminent eclampsia and eclampsia admitted in Obstetrics and Gynecology department.

Exclusion Criteria

- Mothers with known case of Epilepsy.
- Mothers with Meningitis.
- Mother with High grade Fever.

RESULTS AND DISCUSSION

Among the baseline variables analyzed, salient features of this study were:

- 55.73% patients were of Imminent Eclampsia and 44.26% patients were of Eclampsia.
- Majority (59.02%) of subjects belonged to age group of 21-30 years.
- Majority (52.60%) subjects were referred in our hospital and 19.67% patients came direct as emergency patients who had zero antenatal visits. Even patients came from urban areas had no antenatal visits.
- All of the patients with eclampsia had given antihypertensive and MgSo₄ at referral center.
- Majority (81.97%) of the patients with imminent eclampsia and eclampsia had headache as a premonitory symptom out of which 85.29% patients had headache in imminent eclampsia and 77.78% patients had headache in eclampsia. Second most common premonitory symptom was blurring of vision.
- Majority of the patients had altered laboratory parameters.
- Majority (70.49%) of the patients had urine albumin range of $\geq +2$ [proteinuria]
- Majority (49.18%) of the patients had hemoglobin levels

- >11gm/dl.
- Majority (60.66%) of the patients had serum creatinine >0.8mg/dl.
- Majority (78.69%) of the patients had serum bilirubin levels normal.
- Majority (50.81%) of the patients had serum LDH levels raised [>360].
- Majority (37.04%) of the patients of Eclampsia had 2 episodes of convulsion.
- Majority (85.25%) of the patients had diastolic blood pressure of >110 mm of hg.
- Diastolic blood pressure greater than ≥ 110 mm of hg and /or altered laboratory parameters and /or premonitory signs and symptoms associated with imminent eclampsia and eclampsia.

We studied various antenatal variables; salient features of this study were:

- Majority (85%) of the patients came antenatally.
- Majority (70.37%) of the patients were primi.
- Majority (72.13%) of the patients had pedal oedema.
- Majority (83.60%) patients had controlled convulsions with MgSo₄ and (72.5%) patient's blood pressure had controlled with labetalol.
- Majority (63.93%) of the patients had Obstetric ICU stay >48 hours and 95.08% patients had hospital stay >5 days.

We studied various Intranatal variables, salient features of this study were:

- Only 9% patients had presenting features in Intrapartum period.
- Majority (71.93%) of patients had Admission-delivery duration <6 hours in our hospital.
- Majority (85%) of the patients had LSCS and only 15% patients had Vaginal delivery.
- Majority (62.75%) of the patients had indication of LSCS was Unfavorable cervix with poor bishop score.

We studied various Postnatal variables; salient features of this study were:

- Only 6.59% of patients had presenting features in Postpartum period.
- Majority (95.08%) of the patients admitted in OBICU among them HELLP syndrome (21.31%)

We have compared our study with multiple studies like Devabhaktuni et al., Joshi C et al., John France et al, Sup, Dr & Jangale, Dr. (2021), LEONARD OGBONNA AJAH et al., Nigeria. In which results are comparable.

CONCLUSION

After doing this study and reviewing various literature about Imminent Eclampsia and Eclampsia, it can be concluded that pregnancy with Imminent eclampsia and Eclampsia is associated with increase maternal and perinatal morbidity and mortality. They are also associated with lack of antenatal care (<3 ANC visits-75.41%).

In our study, most of the subjects (85%) presented in antenatal period and most of the patients (70.37%) were primi. Majority of the patients had Premonitory symptoms among which Headache was most common (Imminent eclampsia-85% and Eclampsia-77%).

In present study, Majority (85%) of the patients had LSCS. Indication of LSCS was Unfavorable cervix with poor bishop score in majority (62.75%) of the patients. Whereas over all LSCS rate was 33% in all patients admitted in LR in our hospital. LSCS rate is much higher in imminent eclampsia and eclampsia patients as compare to overall patients coming to LR. Majority (95.08%) of the patients had hospital stay >5 days which is more duration than in over all patients coming to LR. Majority (95.08%) of the patients admitted in

OBICU. OBICU admission was done in view of better monitoring of the patients in our hospital. complication seen in these patients were HELLP syndrome, APH, PPH, ARF/CRF, pulmonary edema, DIC.

Patients with imminent eclampsia had less duration of hospital stay and less complications as compared to patients with eclampsia. There are 2 maternal mortalities reported in our study in patients of Eclampsia. So overall morbidity and mortality less in patients of imminent eclampsia than eclampsia.

So, we conclude that Imminent Eclampsia and Eclampsia are associated with higher maternal morbidity and mortality. Improving early registration in 1st trimester, frequent antenatal visits, correction of anemia, identifying and treating cases of preeclampsia will help to reduce occurrence of Eclampsia. We cannot prevent occurrence (pathophysiology) of Pre-eclampsia and Imminent eclampsia, but we can prevent eclampsia by early diagnosis and treatment, proper monitoring and timely intervention.

Table 1: Baseline Variables

Baseline variables (n=61)	Imminent eclampsia	eclampsia
Age		
<20 years	6 (9.84%)	9 (14.75%)
21-30 years	19 (31.15%)	17 (27.86%)
>30 years	9 (14.75%)	1 (1.64%)
Registration		
Booked	15 (24.59%)	2 (3.28%)
Unbooked	19 (31.15%)	25 (40.98%)
Parity		
Primigravida	17 (27.87%)	19 (31.15%)
Multigravida	17 (27.87%)	8 (13.11%)
ANC visits		
<3 visits	23 (37.70%)	23 (37.70%)
>3 visits	11 (18.03%)	4 (6.56%)
Gestational Age		
<28 weeks	1 (1.64%)	3 (4.92%)
28-34 weeks	9 (14.75%)	10 (16.39%)
>34 weeks	22 (36.05%)	12 (19.67%)
Premonitory symptoms		
Headache	29 (47.54%)	21 (34.63%)
Blurring of vision	7 (11.47%)	7 (11.47%)
Nausea & Vomiting	1 (1.64%)	2 (3.28%)
History of treatment in referred patients		
MgSo ₄ taken	10 (31.25%)	16 (50%)
MgSo ₄ not taken	5 (15.62%)	1 (3.12%)
Nifedipine/Labetalol	12 (37.5%)	12 (37.5%)

Table 2: Laboratory Parameteres

Investigational variables	Imminent eclampsia	Eclampsia
Urine albumin		
+1	11 (18.03%)	5 (8.19%)
+2	12 (19.67%)	13 (21.31%)
+3	11 (18.03%)	7 (11.47%)
Haemoglobin		
<7	1 (1.64%)	0
7-9	8 (13.11%)	8 (13.11%)
9-11	10 (16.39%)	4 (6.56%)
Serum Creatinine		
<0.8	16 (26.23%)	8 (13.11%)
0.8-1.2	14 (22.95%)	12 (19.67%)
>1.2	4 (6.56%)	7 (11.47%)
Serum LDH		
<360	20 (32.79%)	10 (16.39%)
360-599	4 (6.56%)	6 (9.84%)
>600	10 (16.39%)	11 (18.03%)

Table 3: Maternal Antenatal And Postnatal Variables

Maternal variables	Imminent eclampsia	Eclampsia
Presenting features		
Antepartum	29 (47.54%)	21 (34.43%)
Intrapartum	3 (4.92%)	4 (6.56%)
Postpartum	2 (3.28%)	2 (3.28%)
Duration of stay		
<5 days	3 (4.92%)	0
6-10 days	18 (29.51%)	16 (26.23%)
> 10 days	13 (21.31%)	11 (18.03%)
Admission delivery duration n= 57		
< 4 hrs	6 (9.84%)	15 (24.59%)
4-6 hrs	12 (19.67%)	8 (13.11%)
7-12 hrs	10 (16.39%)	1 (1.64%)
> 12 hrs	4 (6.56%)	1 (1.64%)
Anticonvulsant treatment given		
MgSo4	28 (45.90%)	23 (37.70%)
Levetiracetam	2 (3.28%)	6 (9.84%)
Mode of delivery		
Normal vaginal delivery	6 (9.84%)	3 (4.92%)
Cesarean section delivery	28 (45.90%)	23 (37.70%)
Indication of LSCS		
Unfavourable cervix/ Poor bishop's score/ Failure of induction	15 (24.59%)	17 (27.87%)
Fetal distress/Persistent fetal tachycardia	3 (4.92%)	3 (4.92%)
Previous LSCS with negative consent for VBAC	4 (6.56%)	1 (1.64%)
Non progress of labour	1 (1.64%)	2 (3.28%)
Maternal complication		
HELLP syndrome	5 (8.19%)	7 (11.47%)
ARF/CRF	4 (6.56%)	6 (9.84%)
PPH	5	3
APH	2	5

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