A RETROSPECTIVE STUDY OF ECLAMPSIA IN A TERTIARY CARE CENTRE

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Eclampsia is defined as the occurrence of convulsions, not caused by any coincidental neurological disease such as Epilepsy, in a woman whose condition also meets the criteria for preeclampsia[1].

In India the incidence of eclampsia has been quoted as 1.56% [2].

Eclampsia may precede pre-eclampsia and an alternative view is that seizures are one of the ranges of signs and symptoms caused by the widespread endothelial cell damage secondary to an ischaemic placenta[3].
Hypertensive disorders are the most common medical complications of pregnancy (6-10%) and a major cause of maternal morbidity and mortality (15%) and foetal morbidity and mortality (22%).

Eclampsia is an acute obstetric emergency and swift treatment and prompt decision making is required to get the best maternal and foetal outcome.

The present study aims to evaluate incidence, and determine maternal outcome and perinatal outcome of eclamptic mothers.
To estimate incidence,
To study efficacy of medication used in eclampsia,
To estimate perinatal & maternal outcomes associated with Eclampsia in our hospital setting.
METHODOLOGY

- This was a retrospective study of all cases of Eclampsia between June, 2012 to June, 2014.
- Case records were reviewed and information were collected and tabulated with respect to the following parameters: Age, parity, Antenatal care, Gestational age at presentation, Type of Eclampsia, Blood pressure, Time since convulsions and delivery mode of delivery, perinatal outcome, maternal mortality and recurrence of fits.
- Data were entered in a format and analyzed manually.
- Results were reported as percentage.
Management of eclampsia in the tertiary care hospital

1) The drug of choice for eclampsia was magnesium sulphate.

2. To prevent recurrence of fits, Prichard intramuscular magnesium sulphate regime was used.

4 gm of magnesium sulphate was given intravenously over 5-10 mins and 4 gm i.m. in each buttock

{total loading dose-12 gm} followed by maintenance dose of 4gm i.m. 4 hourly till 24 hrs after delivery or last fit.
3. In order to continue magnesium sulphate, the patient should have a patellar reflex, urine flow more than 30 ml per hour and respiratory rate of 12/min.

- Diazepam drip-{40 mg in 5% dextrose} at 20 drips/min was given as an alternative, if magnesium sulphate regime was contraindicated.

4. Nifedipine orally was given at regular interval to achieve the desired level of diastolic blood pressure of 90 mm hg or less and a trace of albumin or no albumin in urine (usually 50-100 mg of nifedipine per day).

5. Termination of pregnancy once the patient is stabilized.
RESULTS:

- There were 24 confirmed cases during the time period among 9000 total deliveries, i.e. incidence was 2.6/1000 total deliveries.
- All these patients were treated with Magnesium sulphate by Prichards regime.
- 1) Gravida: Among 24 patients, 14 patients were primigravida, 6 patients were grvida 2 and 4 patients were gravdia 3 or more.
- 2) Age Distribution: 5 cases were less than 20 years old, 16 were between the age group 20-25 years and 3 patients were between the age group ≥26 years.
Eclampsia was found to be more common among young and adolescent women (16 patients, 66.66%).

3) Only 14 patients had some form of antenatal care [58.33%], whereas 10 patients had no antenatal check up [41.66%].

**Figure1. Type of eclampsia:**
 Majority of patients developed fits before the onset of labour.

**Figure 2. Gestational age at the onset of fit:**
Most patients presented with convulsion at term pregnancy.
Figure 3. Diastolic blood pressure at the time of admission

Majority of eclamptic patients presented with mild to moderate hypertension [54.16%]
Figure 4. Systolic blood pressure at the time of admission

- Half of the patients had mild to moderate hypertension [50%]
Table 1. Time since convulsions and delivery:

Among 21 antepartum cases most patients were delivered within 24 hrs.

<table>
<thead>
<tr>
<th>Time</th>
<th>No. of patients(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6 hrs</td>
<td>4 (19.04%)</td>
</tr>
<tr>
<td>6-24 hrs</td>
<td>13 (61.9%)</td>
</tr>
<tr>
<td>&gt;24 hrs</td>
<td>4 (19.04%)</td>
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Table 2. Type of delivery

<table>
<thead>
<tr>
<th>Type of delivery</th>
<th>No. of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spontaneous vaginal delivery</td>
<td>6 (25%)</td>
</tr>
<tr>
<td>Induced vaginal delivery</td>
<td>4 (16.66%)</td>
</tr>
<tr>
<td>Caesarian section</td>
<td>14 (58.33%)</td>
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</tbody>
</table>
Caesarean section was the common mode of delivery among eclamptic patients.

**Table 3. Recurrent fits**

<table>
<thead>
<tr>
<th>Number of fits</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>19 (79.66%)</td>
</tr>
<tr>
<td>1-2</td>
<td>3 (12.5%)</td>
</tr>
<tr>
<td>3-4</td>
<td>1 (4.16%)</td>
</tr>
<tr>
<td>5-6</td>
<td>1 (4.16%)</td>
</tr>
</tbody>
</table>

Only 5 patients had recurrent fits even after starting intervention.
Birth weight: Majority of babies born to eclamptic mothers were of low birth weight babies. Weight of 13 babies was <2.5kg. (54.16%).

Apgar score:

<table>
<thead>
<tr>
<th>Apgar score</th>
<th>(N)</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>&lt;8 after 5 minutes</td>
<td>10</td>
</tr>
<tr>
<td>&gt;8 after 5 minutes</td>
<td>10</td>
</tr>
</tbody>
</table>

Apgar score was less than 8 in majority of new borns.
There were 6 perinatal deaths among eclamptic patients.
This study was done to evaluate incidence, management, perinatal & maternal outcomes.

The present study revealed the incidence of Eclampsia as 2.6 per 1000 deliveries i.e. 0.26% comparable to that from Patan hospital (0.24%) [5].

Present study findings were lower compared to reports from other developing countries- 2.2% [6], 0.93% [7], and higher than that of developed countries like UK, where eclampsia complicates 0.05% of total deliveries [3].

Eclampsia was found to be particularly common in adolescents and young pregnant women (66.66%) and primigravidas (58.33%).
• Acharya G et al, 1991 reported that primigravidas were mostly affected (71.42%) though Eclampsia was commonest in 20-24 years of age group (42.85%)[5].

• In the present study 10 patients had no antenatal care (41.66%) while 14 had some antenatal care either in maternity hospital or outside (58.33%).

• Lack of antenatal care has been documented by several studies as risk factor for Eclampsia-93.99% patients had no antenatal care (S,Jain,et al,1988)[8], 76.66% had no antenatal care (S.Swain et al,1992)[6].
In majority of patients, type of eclampsia was antepartum, which was commonest at term pregnancy (66.66%) in this study.

A study conducted in the UK showed relatively higher proportion of post partum Eclampsia (44%) [3], and in terms of gestation more cases occurred before 37 completed weeks (44%) [3].

Majority of patients had mild to moderate hypertension.

Commonest mode of delivery was caesarian section
The most important maternal morbidity recognized among Eclamptic patients was recurrence of fits. With current intervention strategy, only 5 patients had recurrence of fits after intervention (20.82%).

All patients received magnesium sulphate regime.

In general, aim of treatment in Eclampsia is prevention of further fits as it is the recurrent fits that leads to significant cerebral anoxia and associated with adverse outcome.

The greater efficacy of magnesium sulphate compared to diazepam or phenytoin for prevention of recurrence of fits is now accepted worldwide [9,10,11].
There was no maternal death recorded in hospital.

There were 6 perinatal deaths among eclamptic patients, comparatively lower than that reported of Patan hospital 31.25%[5] still higher than that reported by developed countries-5.42% [3].

Late arrival of patients after onset of fits results in severe intrauterine hypoxia and intrauterine death. Eclampsia occurring preterm necessitates preterm delivery-8 .

Available neonatal care facilities also determines the perinatal outcome.
Eclampsia is a life threatening complication of pregnancy, in our study there was no maternal mortality but perinatal outcome still needs to be improved.

However an improvement in antenatal care, upgrading the neonatal facilities and early delivery by caesarean section can improve the perinatal outcome.
REFERENCES


11. Sibai BM: Magnesium sulphate is the ideal anticonvulsant in pre-eclampsia-eclampsia. Am.J.obstet.gynaecol.1990;**162:**1141-1145