Retrospective Study of Eclampsia in a Teaching Hospital
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Research Article

Abstract: Eclampsia is one of the major cause of both maternal and perinatal mortality in India. Retrospective study of eclampsia was done in our hospital from Jan-2011 to Jun-2013 Over a period of 2½ year to know the incidence, clinical profile and current management of eclampsia patients along with maternal and perinatal outcome. Analysis of case records of all eclampsia patients admitted to our hospital from Jan-2011 to Jun-2013 was done. Incidence of eclampsia was found to be 2.19/1000 deliveries. Eclampsia is a disease of young women between 19-24 years (79%) and primigravida (67%). Majority of them had convulsions before the onset of labour (87%). Eclampsia occurs most commonly at term gestation. Most of them had mild-moderate hypertension at the time of convulsion. Majority had vaginal delivery (63%) with current intervention, there were no maternal deaths. Perinatal mortality was 300/1000 live births. The current intervention for eclampsia is effective in reducing maternal mortality but management of perinatal outcome still needs improvement.

Keywords: Eclampsia, Hypertension.

Introduction
Eclampsia (Greek “Shining forth”) is an acute and life threatening complication of pregnancy. Characterized by convulsions and unexplained coma in a patient with signs and symptoms of pre eclampsia during pregnancy or postpartum period.(1) It has remained as a major public health threat both in developed and developing countries, Contributing to maternal and perinatal morbidity and mortality. Preeclampsia precursor to eclampsia, ranges between 2 % to 10 % of total pregnancies worldwide. WHO estimates incidence of preeclampsia is seven times higher in developing countries than developed world(2). The incidence of eclampsia in developed countries is estimated to about 5-7/10,000 deliveries. Whereas in developing nations varies widely 1 case per 100 to 1 case per 1700 pregnancies (3 and 4). The maternal mortality ratio for India in 2009 was 212 per 1 lakh population (5) with hypertensive disorders causing 5% of maternal deaths(6). Regular Antenatal care and with detection of preeclampsia early, we can prevent eclampsia in large. Unfortunately eclampsia is still a major cause of maternal mortality in developing nations like India with poor socio economic status and lack of antenatal care.

Materials and Methods
We have done a retrospective study of eclampsia cases in Mandya Institute of Medical Sciences, a Teaching and referral Hospital Mandya from January-2011 to June-2013 a period of two and half years. Most of the cases were referred from rural areas, PHC, Community health centre and private hospitals in the district. In this two and half year period a total of 33 eclampsia cases were admitted among 15068 deliveries. Cases ware studied with respect to Antenatal care, Age, Parity, Period of gestation blood pressure, mode of delivery and perinatal outcome.

Immediate care for of ALL Eclampsia cases
All cases were shifted to eclampsia room examined, and started with Pritchard’s regimen. Magnesium sulphate as a anti convulsant, therapy (4gm 20% slow I.V and 5gm 50% IM on each buttocks, followed by 5gm IM alternate buttocks, 4th hourly till 24 hours/last fit). Patellar reflex, Respiratory rate (>12 cycles) and urine output (>30ml) monitored for magnesium toxicity.

(ii) Tab. Nifedipine 10mg orally given to control blood pressure. If not controlled 10mg repeated every 30min maximum of 50mg.

(iii) Supportive therapy – suctioning, mouth gag, I.V. line, oxygen inhalation, mannitol infusion given for all patients.

(iv) Induction/ Acceleration of labor were carried out for termination of pregnancy.

Observations
Our study shows 33 cases of eclampsia admitted to Mandya Institute of Medical Sciences from Jan-2011 to Jun-2013 over a period of Two and half years, among 15,068 deliveries with the incidence of 2.19/1000 deliveries.

Table 1: Age distribution in eclampsia patients

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 year or less</td>
<td>NIL</td>
</tr>
<tr>
<td>19-24 years</td>
<td>26 (79%)</td>
</tr>
<tr>
<td>25-30 years</td>
<td>07 (21%)</td>
</tr>
</tbody>
</table>

Eclampsia is most prevalence at the age between 19-24 years.

Table 2: Period of Gestation at the onset of convulsions

<table>
<thead>
<tr>
<th>Period of Gestation</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-27 weeks</td>
<td>02 (6%)</td>
</tr>
<tr>
<td>28-32 weeks</td>
<td>04 (12%)</td>
</tr>
<tr>
<td>33-36 weeks</td>
<td>13 (40%)</td>
</tr>
<tr>
<td>37-42 weeks</td>
<td>14 (42%)</td>
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</table>
Majority of 94% of patients had eclampsia in third trimester. It is 40% among near term patients (33-36 weeks) and 42% in term patients.

<table>
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<tr>
<th>Table 3: Eclampsia and parity</th>
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<tbody>
<tr>
<td>Primigravida</td>
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<tr>
<td>Multigravida</td>
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In our study eclampsia was commonly seen in primigravida.

<table>
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<th>Table 4: Antenatal care</th>
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<tbody>
<tr>
<td>Booked cases</td>
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<tr>
<td>Unbooked case/Irregular ANC</td>
</tr>
</tbody>
</table>

Most of them were unbooked and referred from periphery. Among booked cases one had intrapartum eclampsia with normal blood pressure. Second a case of pre eclampsia refused admission to the hospital reported with convulsion after 13 days. Third had post partum eclampsia. Fourth one suffered convulsions at 26 weeks (Blood pressure was normal at 20 weeks.)

<table>
<thead>
<tr>
<th>Table 5: Systolic blood pressure and eclampsia</th>
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<tbody>
<tr>
<td>&lt;140 mm hg</td>
</tr>
<tr>
<td>140-159 mm hg</td>
</tr>
<tr>
<td>160-179 mm hg</td>
</tr>
<tr>
<td>&gt;180 mm hg</td>
</tr>
</tbody>
</table>

Approximately 60% patients were having mild to moderate Hypertension. With systolic of < 160 mm hg.

<table>
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<tr>
<th>Table 6: Type of Eclampsia</th>
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<tbody>
<tr>
<td>Ante partum eclampsia</td>
</tr>
<tr>
<td>Intra Partum eclampsia</td>
</tr>
<tr>
<td>Post partum eclampsia</td>
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</tbody>
</table>

Most of them had ante partum eclampsia.

<table>
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<tr>
<th>Table 7: Diastolic Bp Numbers</th>
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<tbody>
<tr>
<td>&lt;80 mm hg</td>
</tr>
<tr>
<td>89-99 mm hg</td>
</tr>
<tr>
<td>100-109 mm hg</td>
</tr>
<tr>
<td>&gt;110 mm hg</td>
</tr>
</tbody>
</table>

Majority of patients were having diastolic Bp >110 mm hg

<table>
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<tr>
<th>Table 8: Type of Delivery in Eclampsia</th>
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<tbody>
<tr>
<td>Vaginal delivery</td>
</tr>
<tr>
<td>Vacuum delivery</td>
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<tr>
<td>Assisted breech delivery</td>
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<tr>
<td>Caesarean Section</td>
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Vaginal delivery was the most common mode of delivery followed by caesarean section. 63% had vaginal delivery followed by 27% by LSCS.

<table>
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<tr>
<th>Table 9: Perinatal Mortality and Morbidity</th>
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<tbody>
<tr>
<td>Live</td>
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<tr>
<td>Intra uterine fetal demise</td>
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<tr>
<td>Still birth</td>
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<tr>
<td>Early neonatal death</td>
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In our study perinatal mortality was 30%

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<th>Table 10: Maternal Complications</th>
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<tr>
<td>Complication</td>
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<tr>
<td>Abruptio placenta</td>
</tr>
<tr>
<td>CVA</td>
</tr>
<tr>
<td>PPH</td>
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<tr>
<td>Post Partum Pyrexia</td>
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</tbody>
</table>

Most common complication in our study was post partum pyrexia. No Maternal deaths noted from Eclampsia in our study.

**Discussion**

Incidence of Eclampsia in our hospital from Jan-2011 to Jun-2013 is 2.19/1000 deliveries. Whereas the incidence of Eclampsia in Eastern India is 3.2%. In Kerla is 3.8%, 4.9% in Andra Pradesh, 15% in Madya Pradesh and 20.7% in Bihar.(7) These figures are higher compare to developed countries. With the incidence of 1 in 3250 pregnancies in US (8) and 1 in 2000 pregnancy in Europe(9). In developed countries, the incidence of eclampsia is significantly low probably because of the comprehensive antenatal care, early detection of pre eclampsia, and its management, and uniform national health care policy. Majority of our cases (88%) were unbooked cases/Irregular Antenatal care, and with low socio economic status. The signs and symptoms of pre eclampsia was not detected until development of eclampsia. In our study eclampsia was common in young pregnant woman between 19-24 years (79%) same as in the (83%) study of Chaurvedi et al.(10). Eclampsia was a disease of primigravida majority of women 67% in our study were primigravida which is comparable to study. Shiraz’s et al 69.1%, Dutta MR et al 66% and shaheen B et al 69% (11, 12 and13). Arround 60% of eclampsia patient have mild to moderate systolic hypertension between 140-160mmhg.Comparable to Choudhary et al (14) having 66% of patient mild to moderate hypertension. In our study 15% of the patients were having systolic Blood Pressure less than 140mmhg and 9% were having diastolic Bp less than 90mmhg which gives inference that eclampsia can occur in small portion of pregnancy with normal Blood Pressure. There was 300/1000 of perinatal death in our study which can be comparing to Rajasri G. yaliwal et al of 350/1000. There were no maternal deaths in our 2 ½ years study from eclampsia.

**Conclusion**

Incidence of eclampsia is little lower compare to other states in India. But we are far behind to developed countries. Eclampsia is a disease of young females, more common in primigravida with mild to moderate hypertension. It can occur with normal B.P without protein uria in a small portion of our study. Most of the patient of eclampsia was irregular/ No antenatal checkups. Eclampsia can be prevented by in large by
proper antenatal care and detection of pre eclampsia with early management.

References