Risk Factors of Eclampsia: A Cross Sectional Study

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Abstract

Introduction: Eclampsia-continue to be a major problem in developing countries like India contributing to significant maternal and perinatal morbidity and mortality. *Aim and Objective:* identify risk factors that lead to eclampsia and decrease the complication related to eclampsia in future. *Material and methodology:* A cross sectional study is conducted to identify the risk factors of all women presenting with eclampsia at new civil hospital Surat, Gujarat during 6 months period. *Results:* 25 cases (83.33%) are primigravida among total 30 cases in study. Majority of the patients were unbooked (73.33%), low socioeconomic class (80%) and presented at late term beyond 36 weeks (50%). Antepartum eclampsia (73.33%) accounted most of the cases and 90% with pre monitor sign and symptoms in which headache (60%) is the most common pre monitor symptom. Mostly present with Blood pressure more than 160 mmHg (56.66%) and proteinuria more than +4 (60%). *Conclusion:* The high incidence of eclampsia and its complication during this study indicate the need for early identification of risk factors and timely intervention to improve maternal and perinatal outcome.

Keyword: Eclampsia, risk factor, maternal complication, parity

Introduction

Eclampsia is defined as preeclampsia complicated by generalized tonic-clonic convulsions aapreciably increase the risk to both mother and fetus [1]. Eclampsia, one of the most dreaded complications of pregnancy and puerperium, is the principal cause of maternal mortality in developing countries [2]. This completely preventable condition continues to afflict indian women because of the lack of antenatal care, delayed diagnosis and ineffective measures of treatment. Evidence for preeclampsia manifestation begins early in pregnancy with covert pathophysiological changes that gain momentum across gestation and eventually become clinically apparent [1]. Unless delivery supervenes, these changes ultimately lead to multiorgan involvement with a clinical spectrum ranging from major finding to one of cataclysmic deterioration [3].

A discussed these are thought to be a consequence of endothelial dysfunction, vasospasm and ischemia. Also impedance to blood flow in uterine arteries increase in pregnancy complicated by utero placental insufficiency and ultimately fetal compromise [3].

Any organ may be involved, but the main organs usually involved are placenta, kidney or brain [1]. In more recent years, the incidence of postpartum eclampsia has declined. This is presumably related to improved access to prenatal care, earlier detection of antepartum eclampsia by risk factors and prophylactic use of $MgSO_4$ [4].

Aims and objectives

- To identify risk factors that leads to eclampsia.
- To decrease the complications related to eclampsia in future by identifying the risk factors.

Material and Methods

This cross sectional study is conducted in the Department of OBG at GMC Surat. 30 consecutive subjects (antenatal, intra natal & post natal) with eclampsia admitted to labour room, NCH Surat over a period of 6 months will be considered for the study after obtaining consent from the subject/ representative. Detailed history was taken for all the cases from the time of antenatal registration (booked or unbooked) regarding age, socioeconomic status, parity, gestational age, time of onset, etc. Clinical examination (general and obstetric examination) and routine investigations were done.

Inclusive criteria: All antenatal, intra natal and post natal (<42 days) patient with eclampsia admitted to labour room.

Exclusive criteria: Convulsion with systemic causes related to pregnancy (like epilepsy, fever, electrolytes disturbance, hypoglycemia, etc).

Results

Table 1: Socio demographic variable

Variable	No. of cases (n)	Percentage (%)
Age (years)		
<20	9	30
20-30	18	60
>30	3	10
Registration		
Booked	8	26.66
Emergency	12	40
Referred	10	33.33
Socioeconomic status		
Low	24	80
Middle	4	13.33
Higher	2	6.66
Parity		
Nullipara	25	83.33
Primipara	2	6.66
Multi para	3	10
No. of ANC visit		
No visit	14	46.66
1	8	26.66
2	4	13.33
>3	4	13.33

Table 2: Clinical variables

Variables	No. of cases (n)	Percentage (%)
Gestational age of presentation(weeks)		
20-28	4	13.33
28-32	2	6.66
32-36	9	30
>36	15	50
Blood pressure (mmHg)		
140/90	4	13.33
140-160/90-110	9	30
>160/110	17	56.66
Proteinuria		
Trace to +1	1	3.33
+2	4	13.33
+3	7	23.33
+4	18	66
Premonitory symptoms		
No symptom	3	10
Headache	18	60
Vomiting	6	20
Epigastric pain	8	26.66
Blurring vision	5	16.66
Decrease urine output	2	6.66
Premonitory signs		
Pallor	21	70
Pedal oedema	23	76.66
Abdomen wall oedema	5	16.66
Vulva oedema	3	3

Table 3: Type of eclampsia

	No. of cases	Percentage (%)
Ante partum	22	73.33
Intra partum	2	6.66
Post partum	6	20

Table 4: Investigation

	No. of cases (n)	Percentage (%)
Haemoglobin (gm/dl)		
<7	5	16.66

7-9	15	50
9-11	7	23.33
>11	3	10
Platlet counts (/mm)		
1 lacs	8	26.66
1-1.5 lacs	12	40
>1.5 lacs	10	33.33
Creatinine (gm/dl)		
<1	18	60
1-2	8	26.66
>2	4	13.66

Table 5: Mode of delivery

	No. of cases (n)	Percentage(%)
LSCS	18	60
Vaginal	12	40

Discussion

In the present study characteristics are more common seen in Primigravida (83.33%) in age group 20-30 years (60%) and low socio economic class (80%) and 73.33% were unbooked and 46.66% were no visit in pregnancy. Majority (73.33%) had anti partum eclampsia. Present mostly in last trimester after 36 weeks (50%). 90% present with premonitor symptoms in which most common was headache (60%) and most common sign was pedal oedema (76.66%) Mostly present with >160/110 mmHg (56.66%) blood pressure and +4 urine albumin (60%) and 40% present with abnormal investigations. Most common mode of delivery is LSCS (60%).

Conclusion

An eclampsia is a preventable complication of preeclampsia. Early identification of high risk factors which lead to eclampsia may help to decrease incidence of eclampsia [4]. To identify high risk patient groups and if these patients receive regular ANC care and explained about pre monitor sign and symptoms of eclampsia, their timely admission may decrease incidence of eclampsia and prevent life threatening complication.

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