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Maternal and fetal outcome of eclampsia in Dinajpur Medical College Hospital Dinajpur, Bangladesh

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Abstract
Background: Eclampsia continues to be a major cause of maternal and perinatal mortality in developing countries. Early identification and management of pre- eclampsia will help reduce the mortality due to eclampsia.
Objective: To determine the maternal and fetal outcome of patients with eclampsia.
Study setting and period: Gynaecology and Obstetrics department of admitted of Upzilla Helth complex, Thakurgaon, Bangladesh, between January 2022 to June 2023.
Study population: The study population was eclampsia with singleton pregnancies presenting during the study period admitted the Department of Obstetrics and Gynecology in Upzilla Helth complex, Thakurgaon, Bangladesh, Bangladesh.
Methods: This cross sectional study of pregnancy outcomes of eclampsia patients. 50 eclampsia patients were taken in this study. Eclampsia was defined as the occurrence of seizures in the presence of preeclampsia (shown by hypertension diastolic blood pressure of at least 90 mmHg, proteinuria one "plus" or at least 0.3 g/24 h occurring after 20 weeks gestation). Patients with any cause for convulsion other than eclampsia were excluded. All the patients taken in this study was admitted in the hospital (inpatients) both in wards and in emergency rooms. All the patients included in the study was evaluated by detailed history, through physical examination and relevant laboratory investigations like blood complete picture, platelet count, coagulation profile, renal function tests, serum electrolytes, uric acid, blood glucose level and urine protein examination.
Results: Almost two third (62.0%) patients belonged to age ≤20 years, 64.0% patients were housewives and more than a half (52.0%) of the patients came from lower class family. Majority (58.0%) patients were nulli para, 44.0% of the patients received antenatal check-up regularly and the mean duration of pregnancy was 36.8±3.1 weeks. Regarding the mode of delivery, it was observed that 18(36.0%) patients had normal vaginal delivery and 32(64.0%) underwent caesarian section among them, 8(25.0%) patients was found post-dated pregnancy, 6(18.8%) were failed induction, 5(15.6%) were cephalo pelvic disproportion, 5(15.6%) were obstructed labour, 4(12.5%) were fetal distress, 2(6.3%) were placenta previa, 1 (3.1%) were pre eclampsia and 1(3.1%) was Rh-ve mother. Almost two third (61.1%) babies were alive in vaginal delivery and 29(90.6%) in caesarean section. The difference was statistically significant ($p<0.05$) between two groups. The mean birth weight was found 2.71±0.73 kg in vaginal delivery and 2.7±0.49 kg in caesarean section. The mean birth weight was not statistically significant ($p>0.05$) between two groups. APGAR score at 1 minute, at 5 minutes. Pulmonary oedema was found 4(22.2%) in vaginal delivery and not found in caesarean section. Postpartum psychosis was found 3(16.7%) in vaginal delivery and not found in caesarean section. Which were statistically significant ($p<0.05$) but other maternal complication were not statistically significant ($p>0.05$) between two groups.
Conclusion: To compare the outcome of labour in vaginal delivery with that of Caesarean section in patients presenting with eclampsia. In this study, mode of delivery has shown significant difference in maternal outcome. The high incidence of eclampsia and its complications during this study period may indicate the need for earlier and more meticulous intervention at both the clinic and hospital levels.

Keywords: Maternal, fetal outcome, eclampsia, Bangladesh

Introduction
Pre-eclampsia is a syndrome of two distinct disease types; it may be purely idiopathic, restricted to and caused by pregnancy, or it may be due to an underlying hypertensive disorder. Chronic renal disease has long been recognised as an important precursor of pre-eclampsia. Nevertheless, its prevalence in pre-eclampsia is uncertain as it may be difficult to detect clinically and there is natural reluctance to perform biopsy for definitive diagnosis. In 1982 Fairley and Birch showed that finding dysmorphic "glomerular" erythrocytes in the urine is a highly specific (93%) and sensitive (99%) indicator of glomerulonephritis.

This simple screening test using phase contrast microscopy has given the opportunity to examine a new the association between chronic renal disease and pre-eclampsia [1]. Eclampsia was First described in the 19th century, this oddly named illness refers to a set of life-threatening symptoms, including high blood pressure along with kidney and liver problems, that can suddenly appear late in pregnancy. In some women it can lead to seizures or eclampsia, a Greek word meaning "bolt from the blue" which can be fatal. Eclampsia is a life threatening complication of pregnancy that typically is viewed as the end stage of preeclampsia. Preeclampsia in pregnancy describes a condition where women have excess levels of protein in urine, and where they have high blood pressure [2, 3]. Other symptoms like a lower platelet count and swelling (edema) can be present too. Though symptoms may be managed to a degree, the condition can't be cured by anything but childbirth, and in about 1% of women eclampsia develops, which can cause violent seizures and coma, and which risks maternal and fetal death in some instances. HELLP syndrome is the medical name given to a serious complication of Pre Eclampsia involving a combination of liver and blood disorders. Eclampsia remains one of the major causes of maternal mortality. The maternal mortality rate is as high as 14.0% in developing countries [4]. In India maternal mortality rate in eclampsia ranges from 8-14% [5, 6]. Features of eclampsia includes, seizures or postictal state, headache usually frontal, generalized edema, vision disturbance such as blurred vision and photophobia, right upper quadrant (RUQ) abdominal pain with nausea, amnesia and other mental status changes [7]. Prevention of eclampsia may be achieved by preventing severe preeclampsia and by active management of impending eclampsia [8]. The only cure for eclampsia is delivery of the baby and with it the placenta, which is the seat of the problem. It is likely that eclampsia will prevail until the etiology and treatment directed to this etiology, is found [9]. The identification of associated factors of preeclampsia and eclampsia, more intensive monitoring by relevant levels of staff, and standardized protocols for treatment instituted promptly will lead to better management of severe preeclampsia and eclampsia. To achieve improvement in prevention and management of the disease, all cases occurring in the country should be reviewed regularly to provide an analysis and overview of management.

Materials and Methods

Study design: Cross sectional study.

Place of study: Department of Obstetrics and Gynaecology, Upzilla Helth complex, Thakurgaon, Bangladesh, Bangladesh.

Study period: January 2022 to June 2023.

Sampling method: Eclampsia patients were recruited for the study purposively.

Sample size: Sample size was calculated from following formula:

$$n = \frac{Z^2\ (pxq)}{d^2}$$

The current study duration is only 6 months, so the targeted sample size cannot be collected during this study duration, therefore 50 eclampsia patients were taken in this study.

Study population: The study population was eclampsia with singleton pregnancies presenting during the study period admitted the Department of Obstetrics and Gynecology in Upzilla Helth complex, Thakurgaon, Bangladesh.

Inclusion criteria

1. Eclampsia with gestational age >32 weeks.
2. Singleton & twin pregnancies
3. Cephalic presentation
4. Fetal heart sound present
5. Eclampsia with renal failure
6. Eclampsia with liver diseases
7. Eclampsia with HELLP syndrome
8. Eclampsia with acute pulmonary oedema

Exclusion criteria

1. Eclampsia with gestational age less than 32 weeks.
2. Eclampsia with coagulation failure
3. Eclampsia with other haematological disorder
4. Eclampsia with coma.

Procedures of collecting data: Pregnant women with eclampsia admitted for delivery in Department of Obstetrics and Gynecology in Upzilla Helth complex, Thakurgaon, Bangladesh be asked for proper history. Data was collected by face-to-face interview by using a pre-design questionnaire. This cross sectional study of pregnancy outcomes of eclampsia patients. Eclampsia was defined as the occurrence of seizures in the presence of preeclampsia (Shown by hypertension diastolic blood pressure of at least 90 mmHg, proteinuria one "plus" or at least 0.3 g/24h occurring after 20 weeks gestation). Patients with any cause for convulsion other than eclampsia was excluded. A specially designed Performa was used to record the relevant data of each patient. It contain the demographic variables such as age, socioeconomic status, gestational age at presentation, time of onset of eclampsia, duration and frequency of seizures, mode of delivery, use of drugs (Especially anticonvulsant), maternal and perinatal outcome. All the patients taken in this study was admitted in the hospital (Inpatients) both in wards and in emergency rooms. All the patients included in the study was evaluated by detailed history, through physical examination and relevant laboratory investigations like blood complete picture, platelet count, coagulation profile, renal function tests, serum electrolytes, uric acid, blood glucose level and urine protein examination.

Procedure of data analysis: Statistical analyses were carried out by using the Statistical Package for Social Sciences version 20 for Windows (SPSS Inc., Chicago, Illinois, USA). The mean values were calculated for continuous variables. The quantitative observations were indicated by frequencies and percentages. Chi-Square test was used to analyze the categorical variables, shown with cross tabulation. Student t-test was used for continuous variables. P values <0.05 was considered as statistically significant. Quality assurance strategy: At every step of data collection, processing and analysis, suggestion from a statistician was sought and the data collected was rechecked to avoid entry of wrong data and ensure analysis using appropriate statistics.

Results

Table 1: Distribution of the study patients according to socio-demographic variable (n=50)

Socio-demographic variable	Number of patients	Percentage
Age		
≤20	31	62.0
≥20	19	38.0
Mean±SD	21.0±2.8	
Range (min-max)	18-30	
Occupational status		
House wife	32	64.0
Service holder	16	32.0
Student	2	4.0
Socio-economic condition		
Lower class	26	52.0
Middle class	24	48.0
Higher class	0	0.0

Table 1 shows socio-demographic variable of the study patients, it was observed that almost two third (62.0%) patients belonged to age ≤20 years. The mean age was found 21.0±2.8 years with range from 18 to 30 years. Almost two third (64.0%) patients were housewives. More than a half (52.0%) of the patients came from lower class family.

Table 2: Distribution of the study patients according to obstetrical history (n=50)

Obstetrical history	Number of patients	Percentage
Para		
0 (Nulli)	29	58.0
1 (Primi para)	14	28.0
≥ 2 (Multi para)	7	14.0
Gravida		
1st	21	42.0
2nd	4	8.0
3rd	5	10.0
5th	20	40.0
Antenatal check up		
No ANC	17	34.0
Regular	22	44.0
Irregular	11	22.0
Duration of pregnancy (wks)		
≤36	24	48.0
>36	26	52.0
Mean±SD	36.8±3.1	
Range (min-max)	33-40	

Table 2 shows obstetrical history of the study patient; it was observed that majority (58.0%) patients were nulli para. Majority (42.0%) patients were 1st gravida. Majority (44.0%) of the patients received antenatal check-up regularly. More than half (52.0%) patients were >36 weeks pregnancy. The mean duration of pregnancy was 36.8±3.1 weeks.

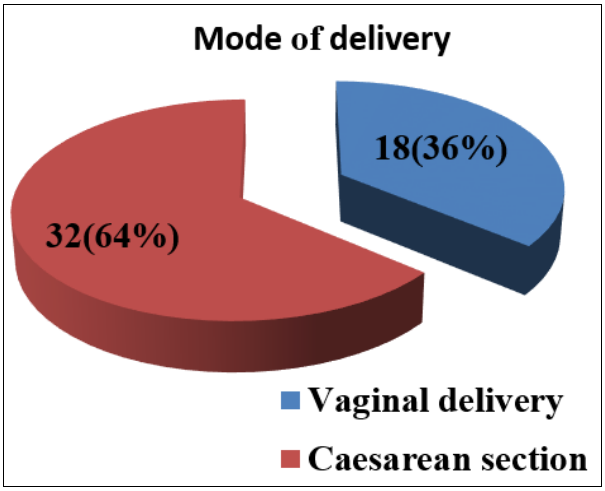

Fig 1: Distribution of the study patients according to mode of delivery (n=50)

Figure 1 shows mode of delivery of the study patients, it was observed that 18(36.0%) patients had normal vaginal delivery and 32(64.0%) underwent caesarian section.

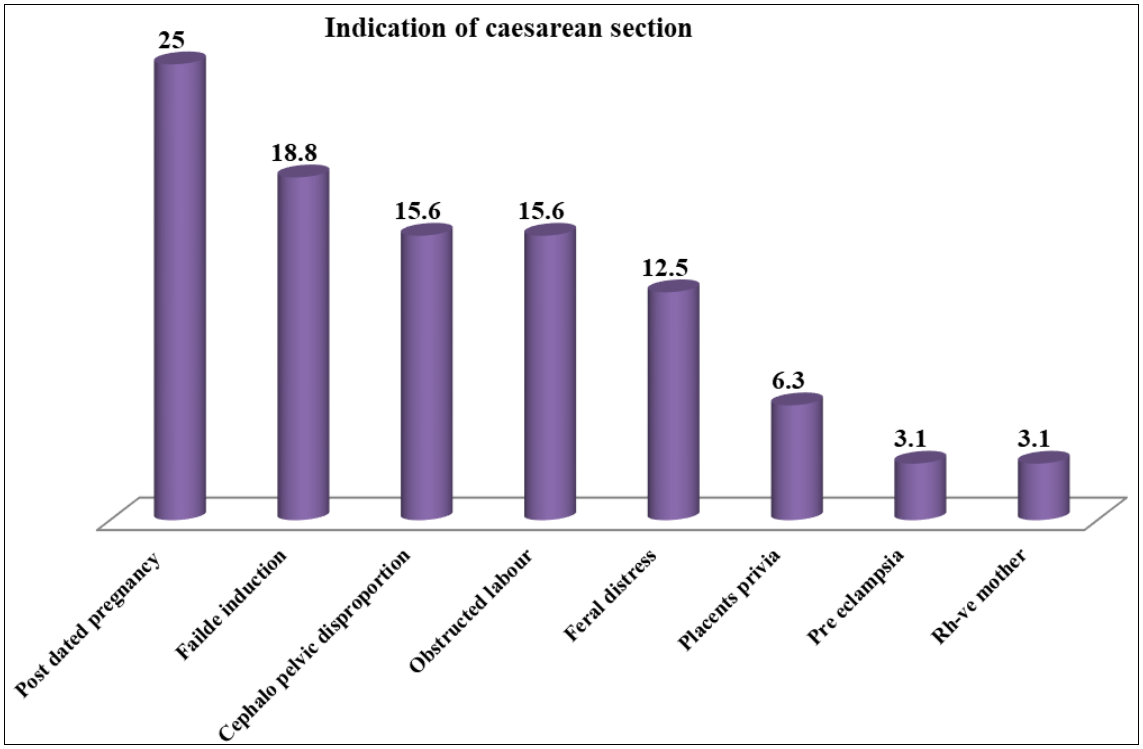

Fig 2: Distribution of the study patients according to indication of caesarean section (n=32)

Thirty-two patients had caesarean section among them, 8(25.0%) patients was found postdated pregnancy, 6(18.8%) were failed induction, 5(15.6%) were cephalo pelvic disproportion, 5(15.6%) were obstructed labour, 4(12.5%) were fetal distress, 2(6.3%) were placenta previa, 1(3.1%) were pre eclampsia and 1(3.1%) was Rh-ve mother (Fig-2).

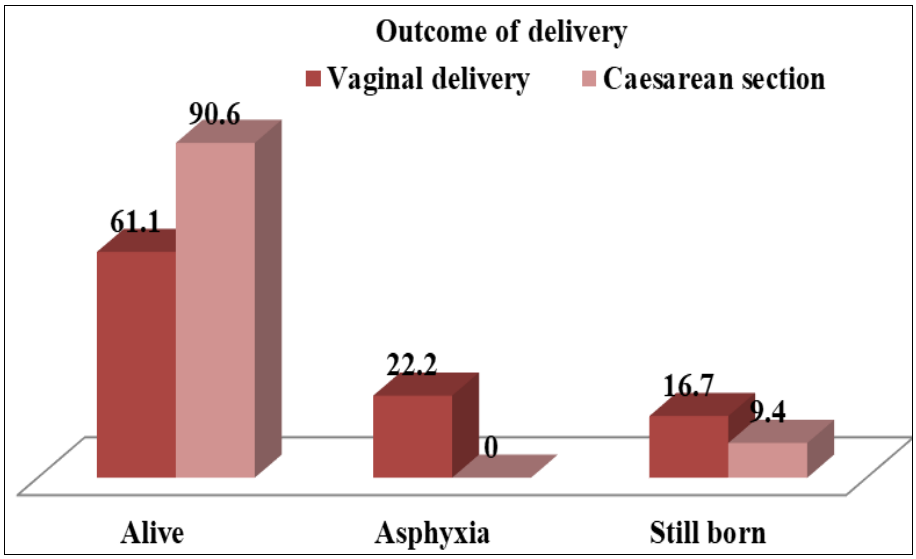

Fig 3: Distribution of the study patients according to outcome of delivery (n=50)

Figure 3 shows outcome of delivery of the study patients, it was observed that almost two third (61.1%) babies were alive in vaginal delivery and 29(90.6%) in caesarean section. The difference was statistically significant ($p<0.05$) between two groups.

Table 3: Distribution of the study patients according to birth weight (n=50)

Birth weight (kg)	Vaginal delivery (n-18)		Caesarean section (n-32)		P value
	n	%	n	%	
1.6-2.4 (LBW)	7	38.9	6	18.8.	
2.5-4.0 (Normal)	9	50.0	26	81.3	
>40 (Macrosomia)	2	11.1	0	0.0	
Mean±SD	2.71±0.73		2.71±0.49		0.954^{ns}
Range (min-max)	2-4.5		1.6-3.5		

ns= not significant, P value reached from unpaired t-test

Table 3 shows birth weight of the study patients, it was observed that half (50.0%) patients had 2.5-4.0 kg birth weight in vaginal delivery and 26(81.3%) in caesarean section. The mean birth weight was found 2.71±0.73 kg in vaginal delivery and 2.7±0.49 kg in caesarean section. The mean birth weight was not statistically significant (p>0.05) between two groups.

Table 4: Distribution of the study patients according to APGAR score (n=50)

APGAR score	Vaginal delivery (n=18)		Caesarean section (n=32)		P value
	n	%	n	%	
At 1 minute					0.584^{ns}
<7	11	61.1	22	68.8	
≥7	7	38.9	10	31.2	
At 5 minute					
<7	0	0.0	0	0.0	
≥7	18	100.0	32	100.0	

ns- not significant, P value reached from chi square test

APGAR score 27 at 1 minute of baby after birth was found 7(38.9%) in vaginal delivery and 10(31.2%) in caesarean section. The difference was not statistically significant (p>0.05) between two groups. APGAR score 27 at 5 minute of baby after birth was found 18(100.0%) in vaginal delivery and 32(100.0%) in caesarean section (Table-4).

Table 5: Distribution of the study patients according to maternal complication (n=50)

Maternal complication	Vaginal delivery (n=18)		Caesarean section (n=32)		P value
	n	%	n	%	
Pulmonary oedema					
Present	4	22.2	0	0.0	0.013^{s}
Absent	14	77.8	32	100.0	
Wound infection					
Present	0	0.0	2	6.3	0.404^{ns}
Absent	18	100.0	30	93.7	
Maternal death					
Present	0	0.0		6.3	0.404^{ns}
Absent	18	100.0		93.7	
Postpartum psychosis					
Present	3	16.7		0.0	0.041^{s}
Absent	15	83.3		100.0	

s= significant, ns- not significant, P value reached from chi square test

Pulmonary oedema was found 4(22.2%) in vaginal delivery and not found in caesarean section. Postpartum psychosis was found 3(16.7%) in vaginal delivery and not found in caesarean section. Which were statistically significant (p<0.05) but other maternal complication were not statistically significant (p>0.05) between two groups (Table-5).

Discussion

Eclampsia with gestational age less than 32 weeks, coagulation failure, other haematological disorder and eclampsia with coma were excluded from the study. The present study findings were discussed and compared with previously published relevant studies. In this present study it was observed that almost two third (62.0%) patients belonged to age ≤20 years. The mean age was found 21.0±2.8 years with range from 18 to 30 years. Begum *et al*. [10] had done a study on 100 patients, out of which 56.0% were aged under 20 years. Ndaboine *et al*. [11] observed that the mean age of the eclamptic patients was 23 years with ranging from 16 to 37 years. In our country Alam and Akhter *et al*. [12] showed most of the patients (75.0%) were below 25 years of age with ranged from 15 to 25 years. Women with age of 20-25 years show eclampsia 44%, 26-30 years 36%, 31-35 years show 20% eclampsia in Yaqub *et al*. [13] study. Rouf *et al*. [14] has shown that maximum numbers of eclampsia patients were between 15 and 25 yrs of age, reflecting the fact that this is a disease of relatively younger age group. The above findings are closely resembled with the present study. In this study it was observed that almost two third (64.0%) patients were housewives and more than a half (52.0%) of the patients came from lower class family. Ndaboine *et al*. [11] showed that housewives was 40.8%, employed 13.2%, business 13.2%, peasant 22.4% and none 100.5%. Begum *et al*. [10] found that 77.0% came from low socioeconomic status. Begum *et al*; Rouf *et al*; Ara *et al*. and Begum *et al*. [15-18] mentioned that eclampsia is a disease of lower class who do not have basic education, do not receive ANC, do not seek health advice & present only in grave form of the disease. Yaqub *et al*. [13] found in their study that 56% cases of eclampsia observed with women who conceived first time i.e. primigravida while 44% were multigravida. In this current study it was observed that majority (58.0%) patients were nulli para. Majority (42.0%) patients were 1st gravida. Begum *et al* and Ndaboine *et al* observed Primi para were 71.0% and 60.5% respectively [10, 11]. Alam and Akhter *et al*. [12] found 61.30% patients were primiparous. Almost similar result have been shown in other studies Begum *et al*. [15]; Ahmed *et al*. [19] Alam *et al*. [20], reflecting the fact that eclampsia is more common among primigravida. In this present study it was observed that 44.0% of the patients received antenatal check-up regularly, 22.0% received irregularly and 34.0% didn't received any antenatal check-up during their current pregnancy. Ndaboine *et al*. [11] showed 44.6% patients received antenatal visit 1-2 times and 53.4% visited 23 times. In our country Alam and Akhter *et al*. [12] observed that 29.0% patients didn't received any no Antenatal care (ANC) and only 17.7 percent had regular antenatal check-up. In this present series it was observed that more than half (52.0%) patients were >36 weeks pregnancy. The

mean duration of pregnancy was 36.8±3.1 weeks. Ndaboine *et al*. [11] showed that 64.5% patients had gestational age <37 wks and 35.5% had gestational age 237 wks. Yaqub *et al*. [13] found 52.0% patients were observed with gestational age of 31-35 weeks while 48% with 36-40 weeks. Alam and Akhter *et al*. [12] observed 4.3% patients were of gestational age <28 weeks, 40.7% of patients had gestational age >37 weeks. Regarding Caesarean section was found 66.2%, spontaneous vaginal Delivery 27.03% and vacuum was found 6.76% observed by [11]. In this series it was observed that 18(36.0%) patients had normal vaginal delivery and 32(64.0%) underwent caesarian section. In another study Yaqub *et al*. [13] showed that caesareans section was done in 36.0% patients and spontaneous vaginal delivery (SVD) was done in 64% patients, which are comparable with the current study. In the developed countries in the past decade indications of LSCS were breech presentation foetal distress, previous section & dystocia (Panel and planning of the national consensus conference on aspects of casarean Birth) [21]. In this study common indications were previous section 16%, foetal distress 15%, obstructed labour 14%, pre-eclampsia and eclampsia 12%. Previous section constitute 20.41% in another study in our country Chowdhury and Begum *et al*. [18] Present study findings correlate with it. Repeat sections constitute the commonest indication for LSCS in most other countries. It varies from 35% of all LSCS in the USA to 23% in Norway, the lowest 18% being in Hungry Magnaun and Winchester *et al*. [22]. The lowest rate in some indications of Caesarean Section - Study of 100 cases in Mymensingh Medical College Hospital. In this present study it was observed that thirty-two patients had caesarean section among them, 8(25.0%) patients was found postdated pregnancy. 6(18.8%) were failed induction, 5(15.6%) were cephalo pelvic disproportion, 5(15.6%) were obstructed labour, 4(12.5%) were fetal distress, 2(6.3%) were placenta previa, 1(3.1%) were pre-eclampsia and 1(3.1%) was Rh-ve mother. Ndaboine *et al*. [11] found that post-partum was 10.53%, unfavorable cervix 51.02%, foetal distress 28.57% and others 20.41%. Regarding fetal outcorne, stillbirth was 20% after vaginal delivery and 6% after cesarean section, the result was statistically significant. Birth asphyxia was less in the cesarean section group (23.4%) than in vaginal delivery group (60%) and this was statistically significant observed by [10]. In this current study it was observed that almost two third (61.1%) babies were alive in vaginal delivery and 29(90.6%) in caesarean section. The difference was statistically significant (p<0.05) between two groups. Perinatal death was very high compared to Sibai *et al*. [23] study 11.8%. But in Bangladesh in several studies perinatal death were 32.1% Shahabuddin *et al et al*. [24], 28.0% Shamsuddin *et al*. [25] and 26.8% Lope M, Lera *et al*. [26]. In this series it was observed that half (50.0%) patients had 2.5-4.0 kg birth weight in vaginal delivery and 26(81.3%) in caesarean section. The mean birth weight was found 2.71±0.73 kg in vaginal delivery and 2.7±0.49 kg in caesarean section. The mean birth weight was not statistically significant (p>0.05) between two groups. Onyeka *et al*. [27] mentioned in their study that incidence of caesarean deliveries is greater in babies weighing 4.1kg and above 36.16% than in low birth weight babies 16.67%. A total of 2192 deliveries during the study period, 386 of these deliveries were via caesarean section, of this number 126 (5.75%) weigh less than 2.5kg, 1889 (86.2%) weigh between 2.5kg-4.0kg while 177 (8.07%) weigh 4.1kg and above. According to this result, Table 3 shows that 1703 (77.7%) babies are born normal, 386 (17.6%) was born by c/s and103 (4.70%) were born by other forms of delivery. Ndaboine *et al*. [11] found 58.54% had a low birth weight. In another study Regenstein *et al*. [28] observed. 116 women with singleton pregnancies with eclampsia and an infant who weighed 1500 gm or less, 54.3% were delivered by cesarean section. In this present study it was observed that APGAR score ≥7 at 1 minute of baby after birth was found 7(38.9%) in vaginal delivery and 10(31.2%) in caesarean section. The difference was not statistically significant (p>0.05) between two groups. APGAR score ≥7 at 5 minute of baby after birth was found 18(100.0%) in vaginal delivery and 32(100.0%) in caesarean section. In study by Ali *et al*. [29] observed that cesarean section has got no advantage over vaginal delivery in terms of condition of the fetus, 5 minutes after birth. Liza *et al*. [30], showed vaginal delivery group had relatively better score than Caesarean section group. So the findings were also comparable with the present study regarding APGAR score. In this series it was observed that pulmonary oedema was found 4(22.2%) in vaginal delivery and not found in caesarean section. Postpartum psychosis was found 3(16.7%) in vaginal delivery and not found in caesarean section. Which were statistically significant (p<0.05) but other maternal complication were not statistically significant (p>0.05) between two groups. Ali *et al*. [29] observed that pulmonary oedaema and wound infection rate was apparently higher in cesarean section group than the patents delivered vaginally. A study carried out in Bangladesh also shows higher percentage of pulmonary oedaema (28%) and CVA (10%) in vaginal delivery group [31]. Munro *et al*. [32] reported that acute pulmonary oedema developed more in post-operative period than in postnatal periods. It may be due to transient reflex hypertension in eclamptic patient during intubation. Sometimes it may be so extreme as to cause acute pulmonary oedema. Excessive fluid administration in post-operative periods may also be responsible and the findings are comparable with the results of the present study. Although eclampsia is associated with an increased risk of maternal death in developed countries 0-1.8% mentioned by Katz, Farmer and Kuller *et al*. [33] and Chames *et al*. [34] where the mortality rate is as high as 14.0% in developing countries reported by Richard *et al*. [35] and Lopez-Llera *et al*. [26]. The high maternal mortality reported from the developing countries was noted primarily among patients who had multiple seizures outside the hospital and those without prenatal care [33]. In addition, this high mortality rate could be attributed to the lack of resources and intensive care facilities needed to manage maternal complications from eclampsia obtained by [23]. A review of all reported pregnancy-related deaths in the United States for the years 1979-1992 identified 4,024 pregnancy-related deaths. A total of 790 (19.6%) were considered due to preeclampsia-eclampsia, with 49.0% of these 790 considered related to eclampsia obtained by MacKay, Berg and Atrash *et al*. [36]. The authors found that the risk of death from preeclampsia or eclampsia was higher for women older than 30 years and those with no prenatal care. The greatest risk of death was found among women with pregnancies at or before 28 weeks of gestation reported by Moller and Lindmark *et al*. [37].

Conclusion

Eclampsia is one of the grave diseases, peculiar to pregnancy, which is still one of the major causes of maternal mortality in Bangladesh. This study was under taken to determine the maternal and fetal outcome of patients with eclampsia. The high rate is due to poor socioeconomic condition, lack of education, inadequate and defective antenatal care and substandard health care services. Termination of pregnancy is the final management of eclampsia and Caesarean section rate is high as a method of termination. From this study, it is found that vaginal delivery

does not worsen the fetomaternal outcome if the cases are selected judiciously and patients are monitored adequately. On the other hand, caesarean section has got its own complications & disadvantages. It is associated with anesthetic hazards, post-operative complications, more expensive and imposes extra facilities. Moreover, it has an influences on future obstetric carrier of the women. Vaginal delivery is simple, service is easily available and cost effective. In this study, mode of delivery has not shown any significant difference in maternal and fetal outcome.

Limitation of the study

- Due to moribund state of eclampsia patients and due to lack of facilities the following investigations could not be done: Renal ultrasonography, Renal biopsy
- As the study was confined to a very limited number of hospitalized patients the conclusions may not reflect the actual situations in the community.
- Sometimes of the attendants of some patients were junable to respond properly to the questionnaire, as they were not relatives of the patients.

Recommendations

The first priority in the management of eclampsia is to prevent maternal injury and to support respiratory and cardiovascular functions. During or immediately after the acute convulsive episode, supportive care should be given to prevent serious maternal injury and aspiration, assess and establish airway potency, and ensure maternal oxygenation. During this time, the bed's side rails should be elevated and padded, a padded tongue blade is inserted between the teeth (avoid inducing gag reflex), and physical restraints may be needed. Caesarean section should be done only when obstetrically indicated. Further large study can be carried out to make a definite comment and to develop a national protocol for obstetric management of eclampsia. However, further studies can be undertaken by including large number of patients in multiple tertiary level hospitals.

Conflict of Interest

Not available

Financial Support

Not available

References

1. Ihle BU, Long P, Oats J. Early onset pre-eclampsia: rec underlying renal disease. Br Med J. 1987;294:79-81.
2. Craici I, Wagner S, Garovic VD. Preeclampsia and future cardiovascular risk: formal risk factor or failed stress test? Ther Adv Cardiovasc Dis. 2008;2(4):249-259.
3. Moodley J, Kalane G. Hypertension. Obstet Gynecol Women's Health Hypertens Pregnancy. 2006;25:47-62.
4. Sibai BM. Diagnosis, prevention, and management of eclampsia. Obstet Gynecol. 2005;105(2):402-410.
5. Saha S, Ghosh Roy S, Ganguli RP. Comparative study of efficacy of magnesium sulphate and diazepam in the management of eclampsia in a peripheral rural medical college (A cross over study of 440 cases). J Obstet Gynecol Ind. 2002;52:69-72.
6. Nobis PN. Maternal outcome in eclampsia. J Obstet Gynecol Asia. 2002;6:25-28.
7. Zhou CC, Zhang Y, Irani RA, Zhang H, Mi T, Popek EJ, Hicks MJ, *et al*. Angiotensin receptor agonistic autoantibodies induce pre-eclampsia in pregnant mice. Nat Med Nat Obsetrics Gynaecol. 2008;14:855-862.
8. Sibai BM, Stella CL. Diagnosis and management of atypical preeclampsia- eclampsia. Am J Obstet Gynecol. 2009;200:481. e1-481.e7.
9. James J. Walker Care of the patient with severe pregnancy induced hypertension. Eur J Obstet Gynecol Reprod Biol. 1996;65:127-135.
10. Begum S, Islam F, Jahan AA. Feto-maternal Outcomes in Cesarean Section Compared to Vaginal Delivery in Eclamptic Patients in a Tertiary Level Hospital. J Enam Med Coll. 2013;3(2):77-83.
11. Ndaboine EM, Kihunrwa A, Rumanyika R, Im HB, Massinde AN. Maternal and Perinatal Outcomes among Eclamptic Patients Admitted to Bugando Medical Centre, Mwanza, Tanzania. Afr J Reprod Health. 2012;16(1):35-41.
12. Alam IP, Akhter S. Perinatal Outcome of Eclampsia in Dhaka Medical College Hospital, Bangladesh. J Obstet Gynaecol. 2008;23(1):20-24.
13. Yaqub S, Zafar B, Mahmood KT, Amin F. Management Of Eclampsia. J Pharm Sci. Technol. 2011;3(1):528-535.
14. Rouf S. Clinical profile and management of eclampsia patients admitted in DMCH by a new protocol of regime- A study of hundred cases. (dissertation) Dhaka: Bangladesh Coll Physicians Surg; c1993.
15. Begum N. Maternal outcome of Cesarean section and vaginal delivery in eclamptic patients- A comparative study (Dissertation). Dhaka: Bangladesh Coll Physicians Surg; c2003.
16. Rouf S, Shamsuddin L, Khan JH. Magesium Sulphate versus diazepam in the management of eclampsia. Bangladesh J Obstet Gynaecol. 1996;11:1-14.
17. Ara I. Clinical presentation of eclampsia in Dhaka Medical College Hospital- A study of 200 cases. (dissertation) Dhaka: Bangladesh Coll Physicians Surg; c1992.
18. Chowdhury SB, Begum A. Indication and complication of caesarian section; a study of 1083 cases. Bangladesh J Obstet Gynaecol. 1994;9:1-7.
19. Ahmed M. A study of Serum Magnesium level in foetal cord blood of eclamptic mothers treated with magnesium sulphate. (Dissertation) Dhaka: Bangladesh Coll Physicians Surg; c2002.
20. Alam Pl. A study of perinatal outcome in eclampsia in Dhaka Medical College Hospital. (dissertation) Dhaka: Bangladesh Coll Physicians Surg; c2002.
21. Panel and planning of the national consensus conference on aspects of casarean Birth. Indication for caesarean section: Final statement of the panel of the national consensus conference on aspects of caesesean birth. Can Med Asso J. 1986;134:1342-1352.
22. Magnaun EF. Factors adversely affecting pregnancy outcome. Am J Perinatal. 1995;12:464.
23. Sibai BM. Maternal perinatal outcome in 254 consecutive cases. Am J Obstet Gynecol. 1990;163:1049-1054.
24. Shahabuddin AKM, Hasnat M, Hamid T, Rahman AKMF. Perinatal outcome in eclampsia. Bangladesh J Child Health. 1996;20:8-14.
25. Shamsuddin L, Rouf S, Khatoon H. Perinatal outcome in eclampsia. Bangladesh J Obstet Gynaecol. 1995;10:65-72.
26. Lope M, Lera L. Complicated eclampsia: fifteen years experience in a referral medical center. Am J Obstet Gynecol. 1982;192:25-28.
27. Onyeka CA, Aligwekwe AU, Aguwa US, Adigwe CC, Nwakama AA, Ukoima HS. A retrospective study of birth weight and caesarean delivery in south-east Nigeria. Int J Pharm Biomed Res. 2011;2(3):211-215.
28. Regenstein AC, Laros RK Jr, Wakeley A, Kitterman JA, Tooley WH. Mode of delivery in pregnancies complicated by preeclampsia with very low birth weight infants. J Perinatol. 1995;15(1):2-6.

29. Ali S. Obstetric management of eclampsia: A study of 100 cases in Dhaka Medical College Hospital [dissertation]. Dhaka: Department of Obstetrics and Gynaecology, Dhaka Medical College Hospital; c2006.
30. Liza C. Role of Caesarean section in improving feto-maternal outcome in eclampsia [dissertation]. Dhaka: Bangladesh College of Physicians and Surgeons; c1998.
31. Chowdhury ML. Role of Cesarean section improving fetomaternal outcome in eclampsia [dissertation]. Dhaka: Bangladesh College of Physicians and Surgeons; c1998.
32. Munro PT. Management of eclampsia in the accident and emergency department. J Accid Emerg Med. 2000;17:7-11.
33. Katz VL, Farmer R, Kuller J. Preeclampsia into eclampsia: toward a new paradigm. Am J Obstet Gynecol. 2000;182:1389-1396.
34. Chames MC, Livingston JC, Invester TS, Barton JR, Sibai BM. Late postpartum eclampsia: a preventable disease? Am J Obstet Gynecol. 2002;186:1174-1177.
35. Richards AM, Moodley J, Graham DI, Bullock MR. Active management of the unconscious eclamptic patient. Br J Obstet Gynaecol. 1986;93:554-562.
36. MacKay AP, Berg CJ, Atrash HK. Pregnancy-related mortality from preeclampsia and eclampsia. Obstet Gynecol. 2001;97:533-538.
37. Moller B, Lindmark G. Eclampsia in Sweden, 1976-1980. Acta Obstet Gynecol Scand. 1986;65:307-314.

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