

FETOMATERNAL OUTCOME AMONG PATIENTS OF ECLAMPSIA DELIVERING BY VAGINAL OR CAESAREAN SECTION

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ABSTRACT

Background: Eclampsia is a condition which is rarely seen in developed nations but still remains a challenge for us. It is imperative to decide upon a mode of delivery which is safe both for the mother and fetus.

Objective: To determine the maternal and neonatal outcome for patients with eclampsia and the complications associated with mode of delivery.

Methodology: It was a cross sectional study conducted from 1st June 2017 to 30th June 2018 at Obstetrics & Gynecology unit 2, Jinnah Hospital, Lahore. All the patients included in the study were induced with Misoprostol 50µg was used for Primigravida and 25µg for Multigravida. Patients were divided in two groups according to the mode of delivery that was decided afterwards depending upon their response to induction. Patients having delayed progress of labor or fetal distress were delivered by caesarean section while others delivered vaginally. Fetomaternal complications were recorded in both the groups. All the data was recorded in pre designed performa and analyzed through statistical software of SPSS version 11. The qualitative variables like fetal and maternal mortality and morbidity were presented frequency and percentage. The quantitative variables like age of patients was presented as means and standard deviation.

Results: Out of 124 patients with Eclampsia, 74.2% were primigravida and rest were multigravida. In this study, 97.6% of the patients were unbooked and 73.4% belonged to lower socio economic group. Maternal deaths were more in caesarean section group, 29.4 % compared to 2.8% in vaginal delivery group. Ventilatory support was required more in caesarean section group (45.28% vs. 14.08%). Still birth was less in caesarean section group (5.66% vs. 25.35%) but neonatal deaths were more in caesarean section group (52.85% vs. 11.26%).

Conclusion: In our study vaginal route of delivery resulted in a better fetomaternal outcome as compared to cesarean section in patients of eclampsia.

Keywords: Eclampsia, Caesarean section, Fetomaternal outcome

INTRODUCTION

Eclampsia is defined as occurrence of fits or unconsciousness in a gravid patient, which may not be associated with any pathology in brain after 24 weeks of pregnancy.^{1,2} It is responsible for causing maternal and perinatal mortality across the globe.³ Severe consequences of hypertensive disorders of pregnancy are responsible for almost 18% of deaths of pregnant females all over the world.^{3,4} For every maternal death, almost twenty patients suffer different complications.

The dire consequences of hypertensive disorders are a challenge for the managing obstetricians and are mostly seen in our set up due to delayed referral and untimely management of patients. In developed nations due to the availability of better facilities of diagnosis, treatment and antenatal care the incidence of complications is much reduced as compared to developing countries where it is seen in 5% of total pregnancies.^{5,6,7} Eclampsia is a pathology involving lining of small vessels of vital organs of the body. The salient features of management include controlling the

seizures, normalizing the blood pressure and delivering the patient. Magnesium sulphate is a safe and efficacious anti convulsant used for control of fits. Hypertension is usually controlled by emergency anti-hypertensive followed by oral medication.^{5,6}

Pregnancy is terminated either by vaginal route or caesarean section.⁷⁻¹⁰ The gestational age is not a contention. Vaginal delivery is chosen in cases where intrauterine fetal death has occurred or where the maternal condition is critical and the patient is unlikely to bear the complications of caesarean section.¹¹⁻¹³

Caesarean section is done where the fetus is alive or where induction delivery interval is crossing the normal limits. Keeping in view the devastation brought about by eclampsia, another thing which needs to be taken into account is the education of masses which could play a pivotal role in improving the outcomes.^{3,7} The objective of the study was to determine the maternal and fetal outcome of the patients with eclampsia and complications associated with the mode of delivery.

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METHODOLOGY

This cross sectional study was carried out in department of Obstetrics and Gynecology, Jinnah Hospital, Lahore after taking approval from Hospital ethical committee.

A total of 125 patients with eclampsia, having gestational age more than 34 weeks, with an alive fetus and unscarred uterus were included in the study after taking informed consent. Detailed history was taken and examination done. Relevant investigations were sent. The condition of the patient was stabilized by using intravenous magnesium sulphate and hydralazine to control the fits and blood pressure respectively.

All the patients were induced with Misoprostol vaginally. Dose of 50µg was used for primigravida and 25µg for multigravida. Partogram was plotted to monitor the events of labor. Caesarean section was done in patients developing fetal distress, uncontrolled blood pressure, and uncontrolled fits or having delay in progress of labor. Rest of the patients were delivered vaginally.

Adverse maternal outcome was recorded in terms of requirement of ventilatory support, need of anti-hypertensive drugs and maternal deaths. Fetal outcome was recorded in terms of live births, still births and early neonatal deaths. The data was entered in pre designed proforma and analyzed through statistical software of SPSS version 11. The qualitative variables like fetal and maternal mortality and morbidity were recorded as frequency and percentage. The quantitative variable like age of patients was presented as means and standard deviation.

RESULTS

A total of 124 patients were included in the study. The age of patient ranged from 16 years to 36 years. Among these patients 32 (25.8 %) were multigravida and 92 (74.2%) were primigravida. Three patients (2.4%) were booked and 121 (97.6%) were unbooked. Two patients (1.6%) belonged to upper middle class, 31 patients (25.1%) belonged to middle class and 91 patients (73.4%) belonged to lower socioeconomic group. In this study, 71 patients (51.3%) were delivered by normal vaginal delivery and 53 patients (42.7%) delivered by caesarean section.

Two (2.8%) maternal deaths were observed in vaginal delivery group and 5 (9.4%) in caesarean section group. Total 10 patients (14.08%) of vaginal delivery group required ventilatory

support and 24 (45.28%) of caesarean section group required ventilatory support. Anti-hypertensive drugs were required by 16 (22.5%) patients of vaginal delivery group and 28 (52.83%) patients of caesarean section group. (Table I)

These were 53 (74.6%) live births in vaginal delivery group 50 (94.3%) in the caesarean section group and 18 babies (25.35%) of vaginal delivery group and 3 babies (5.66%) of caesarean section were still born. Neonatal deaths were 8 (11.26%) in vaginal delivery group and 28 (52.83%) in caesarean section group. (Table I)

Table I: Maternal outcome and fetal outcomes in both groups

Variables	Vaginal delivery No (%)	Caesarean Delivery No (%)
Maternal deaths	2 (2.8%)	5 (9.4%)
Need for ventilatory support	10 (14.08%)	24 (45.08%)
Need for anti-hypertensive drugs	16 (22.5%)	28 (52.83%)
Fetal Outcome	Vaginal Delivery No (%)	Caesarean Delivery No (%)
Live births	53 (74.6%)	50 (94.33%)
Still births	18 (25.35%)	3 (5.66%)
neonatal deaths	8 (11.26%)	28 (52.83%)

DISCUSSION

Eclampsia is a life threatening complication of hypertensive disorders of pregnancy. Early detection, better antenatal care, appropriate use of anti-hypertensive drugs and selection of safest mode of delivery can improve the maternal and perinatal and outcome. The need for improvement in hospital care and follow up cannot be under estimated.⁸⁻¹⁴

In our study, eclampsia was common in young age group as most of our patient's age were between 16 to 36 years and average age being 24 years. Work done by Rauf⁹ and Kumari¹⁵ shows that maximum number of eclampsia patients were between 15-25 years of age. Another study conducted by WHO at various centers shows that maternal age below 17 is highly associated with eclampsia.⁴

Results of two other studies showed 95% patient belong to low socio economic groups and 97.6% of these patients were unbooked. All these findings show that poverty limits the access of patients to healthcare facilities and antenatal services.^{11,12}

It is seen in our study that maternal death were 2.8% in vaginal delivery group and 9.4% in caesarean section group which is contrary to a study in which both groups maternal mortality was observed to be 2%.

In our study, more patients with caesarean section

group required ventilatory support and anti-hypertensive drugs, so study shows that vaginal delivery is associated with less maternal morbidity as compared to caesarean section and fetal outcome was better in caesarean section group as compared to vaginal delivery group. In a study, conducted in India, caesarean section was seen to have a better maternal outcome in patients having eclampsia as compared to vaginal birth. The less serious maternal complications were seen in those delivered by Caesarean Section. The maternal mortality in cesarean section was 1.94% and 14.4 % in vaginal delivery group. The results of this study are in contrast with our study. A study conducted by Ghazala and colleagues,¹³ showed that majority of patients delivered by caesarean section but the mortality rate was higher in the group which underwent cesarean delivery. This local study strengthens results of our study. Results of present study are in contrast with results of study by Shahbudin et al which showed 92 % of perinatal loss.^{3,13,14}

A study conducted by Tehmina,¹¹ shows that majority of cases were delivered vaginally with good maternal outcome. The perinatal loss was 54%. In a study,² caesarean section was seen in 29 % and vaginal delivery was observed in 71 %. Perinatal deaths occurred in 12% .In our study more cases had vaginal delivery which agree to the results of Egyptian study but there were more perinatal deaths i.e. 29% which could be the result of differences in neonatal services.^{2,11}

C section was seen in 40% of the cases and vaginal delivery was seen in 60%.The incidence of maternal complications was more in vaginal delivery, group as compared to the cesarean section group. There was no death in caesarean section group. Perinatal outcome was better in the caesarean section group. The maternal complications in our study were more in C section group and vaginal route was seen more. However, perinatal outcome in our study was not as good as what was seen in Kumari study.¹⁵ The reason could be difference in the nursery care.¹⁵ In brief, studies carried out in different centers present conflicting results, thus indicating a need for more research on the subject, with larger sample size.

This is a small sample study more studies with large sample size are required, which will definitely help us in deciding the better mode of delivery for eclampsia patients.

CONCLUSION

Our study indicates that vaginal delivery is the safer route for patients with eclampsia in terms of fetomaternal outcome. In developing countries like our better fetal monitoring facilities are not available, during labour and caesarean section is done earlier in interest of both fetus as well as mother in cases of eclampsia but neonatal facilities are also limited to save these babies. But in selected patients, however, vaginal delivery is better than caesarean section as demonstrated by this study.

Authors Contribution: SF: Study designed, planned and supervised the research. AA, HM & RW: Conducted the experiment and acquired the data. All authors critically revised and approved its final version.

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