

# Treatment of Eclamptic patients booked versus non-booked at Allama Iqbal Memorial Teaching Hospital: analysis of morbidity

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## ABSTRACT

**Aim:** To analyse the factors which affect the outcome of treatment in eclamptic patients in relation to regular antenatal attendance and non attendance in department of gynaecology and Obstetrics.

**Study Design:** Prospective study.

**Place & duration of study:** Department of Gynaecology & Obstetrics, Allama Iqbal Memorial Teaching hospital, Sialkot. Affiliated to Khawaja Muhammad Safdar Medical College, Sialkot from June 2017 to May 2020.

**Methods:** All patients serially presented in the obstetric emergency of Allama Iqbal Memorial hospital with eclampsia. The patients were classed in two groups: Group I- Patients having record of antenatal visits to our hospital Group II- Patients who were walk in patients and having no record of antenatal checkup. Patients were admitted and managed according to the set protocols and fetal and maternal outcome recorded in relation to mode of delivery and morbidity and mortality. All risk factors were recorded and variables analyzed.

**Results:** Among 597 booked cases, 4.52% patients presented with placental abruption, while among 440 non booked cases, 4.77% patients presented with placental abruption. 11.22% of booked and 11.81% of unbooked developed acute renal failure. 2.17% of booked and 2.04% of unbooked females had CVA. About 7.53% of booked while 9.77% of unbooked had disseminated intravascular coagulation as a complication of eclampsia. Almost 0.50% of booked while 1.13% of unbooked cases died as a result of these or other complications developed because of eclampsia and pre eclampsia.

**Conclusion:** There is much higher frequencies of maternal as well as fetal morbidity and mortality among patients of eclampsia who are not attending the antenatal clinic as compared to those patients who attend antenatal clinics.

**Keywords:** Expectant management, outpatient management, seizure prophylaxis, CVA

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## INTRODUCTION

High blood pressure is one major cause of complications and deaths in developing nations. The related eclamptic fits are usually experienced for the first time within a hospital setting in almost half of such women.

Preeclampsia and eclampsia are acting as major contributors to maternal mortality and morbidity. Hypertensive disorders during gestation may lead to mortality upto 13% according to statistics worldwide amounting to almost 42000 deaths per annum. Decreased level of appreciation for the multiorgan involvement of preeclampsia, along with overly strict criteria for diagnosis, may be obstructing the early diagnosis and adequate management. Recently, the American College of Obstetricians and Gynecologists Task Force on Hypertension in Pregnancy re analyzed the evidence and updated some recommendations for diagnosis and management of this condition. This article scrutinizes some of these recommended alterations, including the hypertensive disease of pregnancy's new classification. Systolic as well as diastolic blood pressure are both considered to be of prime importance in the diagnosis of pre eclampsia<sup>1,2</sup>. Alterations in proteinuria are not suggestive of disease severity, maternal or fetal

complications; hence, the dimensions of proteinuria or changes in the amount should not be dictating the diagnosis or management. Instead, manifestations of cerebral involvement, as headache and visual changes or signs of end- organ damage including abnormal laboratory tests (elevated serum creatinine or liver function tests, low platelet count), verify the severe nature of pre-eclampsia. Recommendation in case of gestational hypertension or pre-eclampsia at 37 weeks gestation or later, is immediate induction of labour without any delay<sup>3,4</sup>. Pregnant and postpartum women need to have proper knowledge about important warning signs and symptoms of preeclampsia. Immediate diagnosis of preeclampsia and appropriate management can improve the quality of safe keeping for women<sup>5</sup>.

Preeclampsia is linked with enhanced maternal and perinatal morbidity and mortality. Preeclampsia is above pregnancy-induced hypertension. The hypertension is only one manifestation of an underlying multifactorial, multisystem disorder, started in early stages of pregnancy. The patients with severe preeclampsia; there is hypovolemia, enhanced arteriovenous reactivity, cardiac output is lesser, there is increased vascular permeability and there is consumptive thrombocytopenia. Severe hypertension in pregnancy must be treated medically<sup>6,7</sup>. The medical treatment includes and aims at continuation of pregnancy, the ability of such therapy to modify the course of the underlying systemic disorder and the consequences

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on fetal and maternal outcome are controversial issues. Few advances regarding the pathophysiology and prevention but many changes in the of patients with pre-eclampsia were done in the past decade. Specifically, recommendations have been made for home or day-care management of a selected group of patients having pre-eclampsia or mild gestational hypertension. Some studies presented that trials showed that expectant treatment and intensive monitoring of pregnancy i.e. state of mother and conceptus may be carried for some patients of severe preeclampsia but gestation must be less than 34 weeks<sup>8,9</sup>. In addition, the magnesium sulfate efficacy in the control and prevention of eclamptic seizures has been validated in world widely performed randomized controlled trials. But some latest studies conclude that there is not big benefit of use of low dose aspirin during pregnancy<sup>10</sup>. The benefit of calcium supplements is more beneficial in reducing the chance of developing hypertension<sup>11</sup>. No study on this subject has been conducted in Sialkot region of Pakistan; so we collected data of our patients and analyzed.

## PATIENTS AND METHODS:

From June 2017 to May 2020; all patients serially presented in the obstetric emergency of Allama Iqbal Memorial Hospital with eclampsia. The patients were classed in two groups: Group I- Patients having record of antenatal visits to our hospital Group II- Patients who were walk in patients and having no record of antenatal checkup. Patients were admitted and managed according to the set protocols and fetal and maternal outcome recorded in relation to mode of delivery and morbidity and mortality. All risk factors were recorded and variables analysed. We set a period of three months of follow up for our patients for inclusion in the study. Data was entered and analysis done by SPSS v 22.

## RESULTS

A total of 1250 patients were enrolled; out of which 213 were lost to follow op. so data of patients who fulfilled the inclusion criteria was analyzed. Actual number of patients included in study were 1037 that were separated in two groups, ones who came for proper antenatal visits (booked cases) and the other who came 1<sup>st</sup> time in hospital for delivery purpose or landed in emergencies(non booked cases). 57.56% patients included in study, were booked and 42.43% of total were having their 1<sup>st</sup> visit at the time of C-section. Among 1037 patients, 60.07% were overweight, 50% were anemic, 20.25% were diabetic, 29.93% were hepatitis C positive. Fetal morbidity is shown in the table III

Table I: Study in brief

Total no of patients operated in 3 years	1250	
Patients lost to follow up	213	
Patients included in the study	1037	100%
Booked cases ( Group- I)	597	57.56%
Non Booked cases ( Group- II)	440	42.43%
Overweight /obesity	623	60.07%
Anaemic	783	75.50%
Diabetic	210	20.25%
Hepatitis C +ve	311	29.93%

Table II – Maternal Morbidity

	Booked cases (Group- I) n= 597 (100%)	Non Booked cases( Group- II) n= 440 (100%)
Placental abruption	27(4.52%)	21(4.77%)
Acute renal failure	67(11.22%)	52(11.81%)
CVA/ intra cranial haemorrhage	13(2.17%)	9(2.04%)
DIC	45(7.53%)	43(9.77%)
Mortality	3(0.50%)	5(1.13%)

Table III – Fetal Morbidity

	Booked cases (Group- I) 597(100%)	Non Booked cases (Group- II) 440(100%)
Prematurity	72(12.06%)	66(15%)
IUD	21(3.51%)	23(5.22%)
Early neonatal death	43(7.20%)	49(11.13%)

## DISCUSSION

This article compares the treatment of booked and non-booked eclamptic patients and also discusses how it effects maternal morbidity and mortality. Total of 1250 patients were operated during the span (3 year) of this research and out of them 213 patients didn't show for follow up after the initial treatment. Analysis of remaining 1037 patients, who fulfilled the inclusion criteria, shows that out of them 57.56% were book cases and 42.43% were non-booked cases.

GDM affects between 6 and 7% of pregnancies in the USA with increasing prevalence secondary to rising obesity, maternal age, and maternal comorbidities. Normal pregnancies accompanied by significant insulin resistance to ensure adequate transfer of glucose to the developing fetus. Women with GDM have metabolic deregulation with exaggerated insulin resistance and an inability of their pancreatic function to match the physiologic insulin resistance of pregnancy. In our study 20.25% of patients were found to diabetic. A meta-analysis of 675455 women with up to 28 years of follow up showed that women with GDM have more than 7 fold increase risk of developing type 2 DM.

Among 597 booked cases, 4.52% patients presented with placental abruption, while among 440 non booked cases, 4.77% patients presented with placental abruption. 11.22% of booked and 11.81% of un-booked developed acute renal failure. 2.17% of booked and 2.04% of un-booked females had CVA. 7.53% of booked while 9.77% of un-booked had disseminated intravascular coagulation as a complication of eclampsia. 0.50% of booked while 1.13% of un-booked cases died as a result of these or other complications developed because of eclampsia and pre-eclampsia. So according to this study, there is increased risk of maternal morbidity and mortality associated with eclampsia.

Almost 12.06% of booked while 15% of non-booked female had premature babies. 3.51% of booked while 5.22% of un-booked had their fetuses died intra uterine. Among the ones who survived 7.20% of booked and 11.13% of un-booked females had early neonatal deaths of their outcomes.

Administration of magnesium sulfate more than halves the risk of eclampsia in women with pre-eclampsia.

It is considered an essential drug by WHO, but data on its availability in relation to prevalence of eclampsia are scarce. Overall, we report that 0.5% of women in our sites experienced eclampsia, 57.2% of women with eclampsia were admitted to ICU, and 6.9% died. The availability of monitoring to rapidly detect deteriorations and initiate treatment such as antihypertensives, magnesium sulfate, and timely delivery is likely to be important achieved with improved surveillance, diagnosis, and timely delivery, with further benefit from fluid-restriction management protocols and increased use of anticonvulsant therapies in more recent decades nearly a third of eclampsia cases occurred in women aged under 20 years. That teenage pregnant women are at greater risk of eclampsia.

## CONCLUSIONS

There is much higher frequencies of maternal as well as fetal morbidity and mortality among patients of eclampsia who are not attending the antenatal clinic as compared to those patients who attend antenatal clinics.

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**Conflicts of interest:** None.

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