

## Frequency of Complications in Patients with Preeclampsia

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### ABSTRACT

**Aim:** To determine the frequency of complications in pregnant women presented with severe pre-eclampsia.

**Study Design:** Prospective/observational study

**Place and Duration:** Social Security Hospital Multan Road Lahore, Duration from 1st July 2019 till 31st August 2020

**Methods:** Total 100 patients with ages 18 to 40 years presented with pre-eclampsia were included in this study. Patients detailed demographic including age, parity, gestational age, and body mass index were recorded after taking written consent. Patients complete blood picture was examined. Complications such as eclampsia, HELLP syndrome, placental abruption etc were examined. Data was analyzed by SPSS 24.0.

**Results:** Out of 100 patients 18 (18%) were ages <20 years, 45 (45%) were ages 20 to 30 years, and 37 (37%) were ages 31 to 40 years. 40 (40%) were primiparous while 60 (60%) were multiparous. Mean gestational age was 32.36±4.72 weeks. HELLP syndrome was the most frequent complication found in 19 (19%) patients followed by placental abruption in 15% and eclampsia in 11% patients. Mortality found in 2 (2%) patients.

**Conclusion:** HELLP syndrome was the commonest complication followed by placental abruption and eclampsia in pre-eclamptic women.

**Keywords:** Pre-eclampsia, HELLP Syndrome, Placental Abruption, Eclampsia, Mortality.

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### INTRODUCTION

The prevalence of Preeclampsia in developed countries is a major health issue in maternal health ranging from 1.8% to 16.7%<sup>[1]</sup>. It affects millions of women worldwide and it is considered to be a direct cause of maternal and foetal morbidity and mortality<sup>[2]</sup>, including heart and stroke, hepatitis and renal failures, placental abruption (AAA), intravascular disseminating coagulation and hemolysis, high levels of hepatic enzyme and low levels of platelet (HELLP) Neonatal morbidity and mortality can also result from this condition because foetal growth restrictions with oligohydramnios, unhealthy foetal conditions, preterm birth, weight of low birth, extreme birth asphyxia, death intrapartum and death may contribute to this condition. It is not yet understood pathophysiology. Placental insufficiency and widespread endothelial dysfunction are nevertheless thought to be<sup>[4-5]</sup> causing it.

The course, prognosis and outcomes of this disease are highly heterogeneous and morbidity and outcomes in developing and developed world patients vary greatly. Although the data from developed countries are missing, studies from the industrialised world have shown less than 10% of complications [6-8].

We conducted present study with aimed to examine the frequency of complications in pregnant women presented with pre-eclampsia.

### MATERIALS AND METHODS

This prospective/observational study was conducted at Social Security Hospital Multan Road Lahore, Duration from 1st July 2019 till 31st August 2020. Total 100 patients with ages 18 to 40 years presented with pre-eclampsia were included in this study. Detailed demographic data

including age, parity, age of gestation, and a body mass index were reported after written consent. Preeclampsia was characterised as a systolic blood pressure >160mmHG and diastolic BP > 110mmHG and has a severe proteinuria. The research removed patients with cardiovascular disease, chronic renal failure and other abdominal operations.

Patients were examined for a full blood image. After review, laboratory investigations were sent. Indoor treatment of patients was conducted on the basis of unit protocols and eclampsia, abrupt placenta, HELLP, Global complications such as heart failure, coagulopathy, kidney, and maternal mortality were observed. The pregnancy was discontinued and the disease was treated in patients with these complications. All the data was analyzed by SPSS 24.0. Mean±SD was done. Frequencies and percentages were recorded in tabulation form.

### RESULTS

18 (18%) were ages <20 years, 45 (45%) were ages 20 to 30 years, and 37 (37%) were ages 31 to 40 years. 40 (40%) were primiparous while 60 (60%) were multiparous. Mean gestational age was 32.36±4.72 weeks. Mean body mass index (BMI) was 21.66±2.54 kg/m<sup>2</sup>. (Table 1)

Overall complications occurred in 48 (48%) patients while 52% patients had no complications. (Figure 1)

HELLP syndrome was the most frequent complication found in 19 (19%) patients followed by placental abruption in 15% and eclampsia in 11% patients, coagulopathy found in 2 (2%) patients, and 1 (1%) patients developed acute renal failure. Mortality found in 1 (1%) patient. (Table 2)

Table No 1: Baseline details of patients

Characteristics	Frequency No.	%age
Age (Years)		
<20	18	18
20 to 30	45	45
31 to 40	37	37
Parity		
Primiparous	40	40
Multiparous	60	60
Mean Gestational Age	32.36±4.72	-
Mean BMI (Kg/m)	21.66±2.54	-

Figure No 1: Frequency of complications

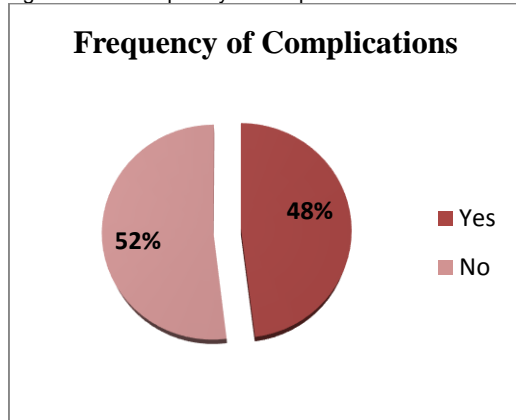


Table No 2: Complications associated with pre-eclampsia

Variables	Frequency No.	%age
Complications		
HELLP syndrome	19	19
Placental Abruptio	15	15
Eclapmsia	11	11
Coagulopathy	2	2
Acute Renal Failure	1	1
Mortality		
Yes	1	1
No	99	99

**DISCUSSION**

Pre Eclampsia, associated with an elevated rate of morbidity and mortality, is a common gynaecological and obstetric disorder<sup>[9]</sup>. This research was conducted to investigate the significant maternal complications of preeclampsia. In this link, we included 110 pre-eclampsia patients. Most of the patients were aged between 20 and 30 years, followed by 37% between 30 and 40 years, respectively. These findings were similar to many previous studies, in which pre-eclamptic women were the majority between the ages of 25 and 35. 10-11)<sup>[10-11]</sup>.

In our study , we found 40% (40%) primiparous and 60% (60%) multiparous patients. Mean pregnancy was 32.36±4.72 weeks. The average BMI index was 21.66±2.54 kg / m2. A trial headed by E. Curiel-Balsera et al<sup>[12]</sup> have recorded 32±4 weeks of average gestational age in pre-eclamptic patients.

Overall complications in this study have been found in 48 (48%). A research by Kumari A et al<sup>[13]</sup> found that in pre-clamptic patients, the incidence of maternal complications was 14 to 53 percent. We found that the most common complication found in 19 (19%) patients was HELLP

syndrome followed by 15% placental abruptio and 11% eclampsia. Coagulopathy was found in 2 (2%) patients; and 1 (1%) patients had acute renal failure. A research by Nankali A et al<sup>[14]</sup> recorded that 22 cases (6.3%) of eclamptic seizure were found to have HELLP syndrome in 1 (0.3%) patient. Placental abruptio in 7.7 percent (27 cases) was obstetrical complication. In pre-eclamptic patients, Solwayo Ngwenya <sup>[15]</sup> identified 9.1% of 118 patients with HELLP syndrome as the most common complication.

In their report, the most prevalent complication observed was eclampsia in 21%, accompanied by renal failure, abruptio and HELLP syndrome, under Xue-Jun Gao et al<sup>[16]</sup>.

We discovered 1 (1%) of patients had been died and 1 of them had HELLP syndrome and 1 of them had acute renal failure. These findings were similar to some previous studies<sup>[17-19]</sup>.

**CONCLUSION**

We concluded from this study that HELLP syndrome was the commonest complication followed by placental abruptio and eclampsia in pre-eclamptic women. The mortality rate in pre-eclamptic women was 1%.

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