

Role of Antihypertensive Drugs in Pregnant Patients with Hypertensive Disorders

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ABSTRACT

Aim: To determine the role of antihypertensive drugs in pregnant patients with hypertensive disorders.

Methods: This analytical study was carried out in the Gyanae ward, Umar Hospital Multan from February 2015 to September 2015. Three hundred and ten cases were selected from patients fulfilling the inclusion criteria, who were admitted in the Umar Hospital Multan based upon inclusion criteria.

Results: Patients mean age was 23.38±3.87 years. Majority of the patients 147(47.4%) were between the age of 21–25 years. Majority of women were primigravidae 140 (45.2%). Mean gestational age was 35.23±3.9 weeks. All the patients having HELLP syndrome were unbooked. There were 195(62.9%) cases of severe preeclampsia and 115 (37.1%) cases of eclampsia. All the cases in which HELLP syndrome developed were included as cases of eclampsia.

Conclusion: A low frequency of HELLP syndrome was found in our study i.e. 5.8% as compared to local data effectively managed by antihypertensive drugs.

Keywords: HELLP syndrome, Preeclampsia, eclampsia, Aldomet - Methyldopa

INTRODUCTION

Hypertensive disease of pregnancy, also known as maternal hypertensive disorder, is a group of diseases that includes preeclampsia, eclampsia, gestational hypertension, and chronic hypertension¹.

Hypertensive disorders of pregnancy are responsible for significant maternal and perinatal morbidity and are second leading cause after embolism of maternal mortality^{1,2}. Hypertensive disorders of pregnancy complicate approximately 12%–22% of all pregnancies^{2,3,4}. Gestational hypertension, which includes pre-eclampsia and eclampsia is responsible for 70% of cases, whereas chronic hypertension for 30% of hypertensive disorders of pregnancy^{5,6,7}.

Statistics from different studies show that there is variation in the frequency of HELLP syndrome. The Frequency of HELLP syndrome was reported 3.3% in a local study of Peshawar⁸. It is a severe condition that occurs in 70% of patients with severe pre-eclampsia or immediately after delivery in the remaining 30%⁹. HELLP syndrome is associated with high maternal morbidity and mortality. The reported rate of maternal mortality due to HELLP syndrome ranges from 1% to 24%¹⁰. Data from developed countries showed maternal mortality of about 3–5% due to HELLP syndrome¹¹.

HELLP syndrome is a serious multisystem disease involving liver, lungs and kidney damage. It is often associated with serious obstetrical complication such as disseminated intravascular coagulation (DIC) 5%, acute renal failure 11%, pleural effusion 3%, cerebral edema 8%, abruptio placentae 11%. The etiology of HELLP syndrome is unknown but this syndrome is also associated with high perinatal mortality and reported incidence is 30–40%¹².

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The objective of the study was to determine the role of antihypertensive drugs in pregnant patients with hypertensive disorders.

MATERIALS AND METHODS

This study was carried out in the Gyanae Ward of Umar Hospital Multan from February 2015 to September 2015. Three hundred and ten subjects were selected who were admitted in the emergency labor Ward, Department of Obstetrics & Gynecology, Umar Hospital Multan based upon inclusion criteria.

RESULTS

Out of the 310 patients 195 (62.9%) were having severe pre-eclampsia while 115 (37.1%) were presented with eclampsia. There were 39 unbooked cases (12.6%) and 271 patients (87.4%) were booked. All the patients who developed HELLP syndrome were unbooked. Forty six women (14.8%) were having gestational age 21–31 weeks and 264 women (85.2%) presented during 32–42 weeks of gestation. Mean age was 35.23 ± 3.9 weeks. Frequency of HELLP syndrome in present study was 5.8% (18/310) among women having hypertensive disorders.

Majority of the patients 147 (47.4%) were between the age of 21–25 years. There were 3 women (1.0%) of the age of 36–40 years (Table 1).

Majority of women were primigravidae 140 (45.2%) as shown in Table-2.

Out of the total 94 patients between the age of 16–20 years, 6(6.4%) developed HELLP syndrome (Table-3). Age had no significant effect on the development of HELLP syndrome among different age groups ($p>0.05$). Out of the total 140 primigravidae 5(3.6%) developed HELLP syndrome (Table 4). Significantly more women developed HELLP syndrome having low parity ($p=0.006$). Out of the total 46 patients presented between 21–31 weeks of gestation, 2 patients (4.4%) developed HELLP syndrome (Table-5).

Table 1: Age distribution (n=310)

Age (years)	n	%age
16-20	94	30.3
21-25	147	47.4
26-30	56	18.1
31-35	10	03.2
36-40	03	01.0

Table 2: Parity distribution (n=310)

Parity	n	%age
Primigravida	140	45.2
Nullipara	18	05.8
Para 1 – 2	89	28.7
Para 3 – 4	38	12.3
Para 5 and above	25	08.0

Table-3: Age distribution in relation to Outcome

Age (yrs)	n	Patients with HELLP	%age
16-20	94	6	6.4
21-25	147	9	6.1
26-30	56	3	5.4
31-35	10	0	-
36-40	03	0	-

Table-4: Parity Distribution in Relation to Outcome

Parity	n	Patients with HELLP	%age
Primigravida	140	05	03.6
Nullipara	18	01	05.6
Para 1 – 2	89	10	11.2
Para 3 – 4	38	01	02.6
Para 5 and above	25	01	04.0

Table-5: Gestational Age Distribution in Relation to Outcome

Age (weeks)	n	Patients with HELLP	%age
21-31	46	02	4.4
32-42	264	16	6.1

DISCUSSION

Gestational hypertension, which includes pre-eclampsia and eclampsia is responsible for 70% of cases, whereas chronic hypertension for 30% of hypertensive disorders of pregnancy.

HELLP syndrome is one of the serious complications of hypertensive disorders of pregnancy presenting with severe form of pre-eclampsia/eclampsia. The etiology of HELLP syndrome is unknown but this syndrome is also associated with high perinatal mortality and reported incidence is 30–40%¹³.

Present study was conducted to determine frequency of HELLP syndrome in pregnant women having severe form of preeclampsia and eclampsia. Out of the 310 patients 195 (62.9%) were presented with severe preeclampsia while 115(37.1%) were having eclampsia. Mean age of the patients was 23.38±3.87 years. Majority of women were primigravidae 140(45.2%). Frequency of HELLP syndrome in present study was 5.8% among women having severe form of preeclampsia or eclampsia.

Shazia et al have reported frequency of HELLP Syndrome was 8% in cases of severe pre-eclampsia in their study^{14,15,16}. Rabia et al in a study from Mayo hospital Lahore have reported the incidence of HELLP syndrome 25%, which is perhaps due to increased incidence of eclampsia and its complications seen in our part of world¹⁷.

Frequency of HELLP syndrome as 3.33% in eclamptic patients in a local study of Peshawar¹¹.

Saima and colleagues in a study conducted at Karachi revealed frequency of HELLP syndrome in eclampsia as 18.86% which denoting that patients attending public sector hospital were having severe disease spectrum⁹. Zuberi et al found the overall incidence of HELLP syndrome 0.4% which is quite low as compared to other local available data¹⁸.

Even in a local study in a tertiary care hospital of Peshawar, reported the frequency of HELLP syndrome as high as 80.5% as a complication of pregnancy induced hypertension¹⁹.

Another report of 615 Indian pregnant women found the incidence of HELLP syndrome was 23.68% among hypertensive disorder during pregnancy^{20,21}.

In another report found that there were 518 pregnancies complicated by hypertensive disorders and 93 by HELLP syndrome. The incidence of HELLP syndrome among women with severe preeclampsia was 19.5%²². Khalil et al in a study from Bahrain have reported that incidence of HELLP was 0.025%. In this series however, the incidence is significantly less. This may be due to a genuine difference or even misdiagnosis of milder cases²³.

In a report from UK, it was found that four women had HELLP syndrome out of 214 preeclamptic (1.87%). The above mentioned literature clearly shows a variation with regards the incidence of HELLP syndrome in different centres. The differences might be due to the differences in patient's characteristics and conditions in each population and the differences in diagnostic criteria¹⁰.

CONCLUSION & RECOMMENDATION

A low frequency of HELLP syndrome was found in our study i.e. 5.8% as compared to local data effectively managed by antihypertensive drugs.

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