

Study of help syndrome incidence and maternal outcome

Nishu Priya^{1*}, Anita Sharma²

¹Consultant OBG Health and Family Welfare, Sarwal, Jammu, J & K, INDIA.

Professor, Department of OBG, SMGS Hospital Government Medical College, Jammu, J & K, INDIA.

Email: nishupriyav5@gmail.com

Abstract

Background: Weinstein coined the acronym “Help syndrome” to describe special group of pre-eclamptic women who had evidence of elevated liver enzymes and low platelets H-Hemolytic anaemia EL: Elevated liver enzymes LP Low platelet count Criteria for diagnosis was as defined by Sibai HELLP syndrome is a life threatening condition for both mother and her infant. At present no method is available to make a reliable diagnose before clinical manifestation of disease. Thus the HELLP syndrome can so far be only diagnosed by evaluation of the symptoms and consequent determination of Laboratory partameters. **Aims and Objectives:** To find out ¹the incidence of HELLP syndrome in eclampsia-eclampsia; antepartum and postpartum ²Maternal morbidity and mortality in pregnancy complicated by HELLP syndrome. **Material and Methods:** This prospective study was conducted on 100 consecutive patients of pre-eclampsia- eclampsia at Govt. Medical College Deptt of Obstetrics and Gynaecology Jammu. These patients were divided into three groups and maternal outcome was compared in each group. Group A Women with PIH but without HELLP syndrome Group B Partial HELLP syndrome GPC Complete HELLP syndrome **Observation:** Incidence of HELLP syndrome in our study was 18% (11% partial and 7% complete) 22.22% of patients developed HELLP syndrome at Gestational age less than 28 weeks which was found to be statistically significant. Majority of patients had headache (72% as presenting complaint. Most common maternal complications was PPH and abruption Maternal mortality was 5.5%. **Conclusion:** HELLP syndrome is life threatening for mother and her foetus, Awareness and aggressive timely management will go a long way in reducing maternal morbidity and mortality in HELLP syndrome.

Key Word: HELLP syndrome, PIH, Maternal outcome.

* Address for Correspondence:

Dr. Nishu Priya, Consultant OBG Health and Family Welfare, Sarwal, Jammu, J & K, INDIA.

Email: nishupriyav5@gmail.com

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INTRODUCTION

Weinstein¹ coined the acronym “HELLP syndrome” to describe special group of pre-eclamptic women who had evidence of hemolysis, elevated liver enzymes and low platelets. H-Hemolytic Anaemia EL Elevated Liver Enzymes LP Low platelet count Sibai² laid down the criteria for the diagnosis of HELLP syndrome.

Hemolysis: Peripheral blood film showing evidence of microangiopathic haemolytic anaemia in the form of

Burr cells and or schistocytes. Absent Plasma Haptoglobin S. Bilirubin $\geq 1.2\text{mg}$

Elevated Liver Enzymes

SGOT ≥ 70 IU/Lt

LDH ≥ 600 IU/l

Platelet Count $< 100,000/\text{mm}^3$ Audibert³ proposed classification system based on the partial or complete expression of HELLP syndrome Complete HELLP: Women having all the features of HELLP syndrome. Partial HELLP: Women having only one or two of the features. HELLP syndrome is insidious in onset, obtuse to easy clinical recognition and often misinterpreted as a non-obstetrical disorder like viral hepatitis, biliary colic, hemolytic uremic syndrome (HUS). Thrombotic thrombocytopenic Purpura (TTP) autoimmune thrombocytopenic purpura, esophageal reflux, cholecystitis and treated in other departments, thereby delaying obstetrical management. Because HELLP syndrome is often not attended by usual signs and symptoms of its parent disease- pre-eclampsia, it in its milder form can be missed unless the ominous subtle

symptoms are looked for and appropriate laboratory assessment is performed- HELLP process is often advanced before an accurate diagnosis is made. How rapidly patient recovers from HELLP complicated pre-eclamptic-eclamptic pregnancies depends on number of factors including when in the course of disease progression pregnancy termination occurs.

MATERIAL AND METHODS

This prospective study was conducted on 100 consecutive patient of PIH at Govt Medical College Deptt. of Obs.and Gynae Jammu. These patients were divided in three groups and maternal outcome was compared in each group. Group A Women with PIH but without HELLP Syndrome Group B Partial HELLP syndrome Group C Complete HELLP syndrome

OBSERVATIONS

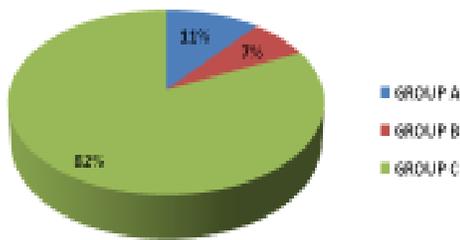


Figure 1

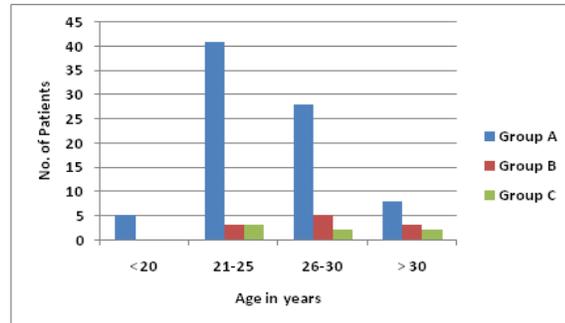


Figure 2

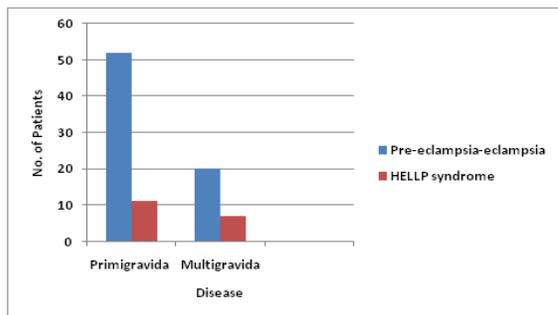


Figure 3

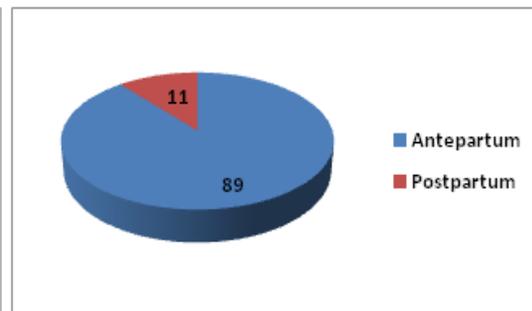


Figure 4

Legend

Figure 1: Pie Chart showing group wise distribution of patients; **Figure 2:** Bar Chart showing age distribution of study group; **Figure 3:** Bar chart showing parity distribution in Pre-eclampsia-eclampsia and HELLP syndrome; **Figure 4:** Pie Chart showing onset of HELLP syndrome

The incidence of HELLP syndrome in our study was 18% (11% partial and 7% complete HELLP) Majority of patients with HELLP syndrome (38.8%) were in age group 26-30 years with mean maternal age of 27 years. It is apparent from the fig 3 that pre-eclampsia-eclampsia with and without HELLP syndrome occurred more in primigravida than multigravida. 89% of our patients developed HELLP syndrome during antepartum period and 11% during postpartum period.

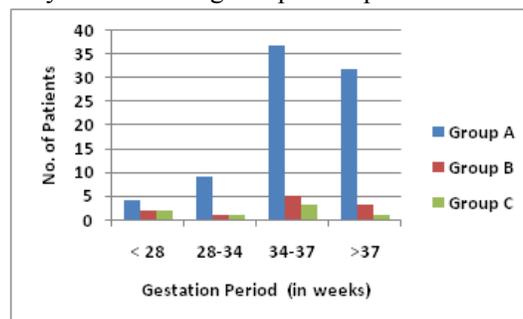


Figure 5: Bar Chart showing frequency distribution of period of gestation

Majority of the patients in our study group presented at Gestational age 34-37 weeks 22% of the patients with HELLP syndrome presented at Gestational age <28 weeks as compared to 4.8% of patients without HELLP syndrome which was found to be statistically significant. Patient presented with wide spectrum of complaints.

Table 1: Frequency distribution of presenting complains in patients in study group

Complaints	PIH without HELLP Syndrome	HELLP Syndrome
	n=82 (%)	n = 18 (%)
Headache	44 (53.65%)	13 (72.22%)
Nausea/Vomiting	36 (43.90%)	12 (66.66%)
Epigastrium Pain and Right Upper Quadrant Pain	1 (1.21%)	11 (61.11%)
Edema and Excessive Weight Gain	32 (39.02%)	8 (44.44%)
Disorientation	5 (6.09%)	3 (16.66%)
Convulsions	7 (8.53%)	2 (11.11%)
Jaundice	Nil	2 (11.11%)
Blurring Vision	4 (4.875)	1 (5.55%)
Hemetemesis / Malena / Bleeding from any site	Nil	1 (5.55%)
Oliguria	4 (4.87%)	1 (5.55%)

The most striking symptoms pain epigastrium and right hypochondrium was the presenting complaint in 61% of patients with HELLP syndrome as compared to only 1% in patients with PIH but without HELLP syndrome. However, the most common complaint was headache (72%) followed by Nausea and Vomiting (67%)

Table 2: Observed complications in patients in study group

Complication	Patients with Pre-eclampsia- eclampsia without HELLP syndrome n = 82	Patients with HELLP syndrome n = 18
	Post partum Haemorrhage	16 (19.5%)
Abruption Placentae	6 (7.3%)	3 (16.16%)
Convulsions	4 (4.87%)	2 (11.11%)
Acute renal fracture	3 (3.65%)	2 (11.11%)
Pulmonary edema	2 (2.43%)	1 (5.5%)
Disseminated Intravascular Coagulation	1 (1.2%)	1 (5.5%)
Intracranial Haemorrhage	1 (1.2%)	2 (11.11%)
Maternal Mortality	Nil (0%)	1 (5.5%)

DISCUSSION

HELLP syndrome is a life threatening condition for both the mother and the fetus. At present methods are not available to make a reliable diagnosis before clinical manifestation of disease. Thus the HELLP syndrome can no far be only diagnosed by evaluation of symptoms and consequent determination of the laboratory parameters The criteria for the diagnosis of HELLP syndrome was as suggested by Sibai² The incidence of HELLP syndrome ranges from 3-23% (Sibai⁴, Rath *et al*⁵, Reddi *et al*⁶, Banoo S⁷. In our study HELLP syndrome was seen in 18% of patients with pre-eclampsia-eclampsia. Out of which 11% were partial HELLP and 7% were complete HELLP. The high incidence in the present study can be attributed to the difference in the population studied (a large percentage of referred complicated cases. Pre-eclampsia-eclampsia with and without HELLP syndrome occurred more in primigravida that multigravida. Similar observations were made by Weinstein¹ and Reddi *et al*⁶. Majority of patients (44.44%) with HELLP syndrome presented at

Gestational age 34-37 wks 22.2% after 37 wks and 11.11% presented between 28-34 wks. 22.22% of patients developed HELLP syndrome at Gestational age less than 28 wks which was found to be statistically significant. In a study conducted by Rose *et al*⁸. 37.5% of their cases developed HELLP syndrome before 28 wks. Patients presented with wide spectrum of complaints with some of them having more than one complaint. The most striking clinical symptom of HELLP syndrome-pain epigastrium/ right upper quadrant pain was observed in 61% of patients. Majority of the patients had headache (72%) and Nausea and Vomiting (66.86%) Martin⁹ too observed headache (65%) as the main complaint where as other authors (Weinstein *et al*¹, Reddi *et al*⁶, Sibai¹⁰, found nausea, vomiting and pain epigastrium as the main presenting complaint. 89% of patients in the present study had antepartum onset of HELLP syndrome and 11% had postpartum onset. The patients with post partum HELLP syndrome had evidence of Pre-eclampsia before delivery and they developed HELLP syndrome within 48 hrs after delivery. Higher incidence

of antepartum cases in the present study as compared to Sibai¹⁰ (70%). Reddi⁶ (77%) was because of small number of patients in present study, Pregnancies complicated by pre-eclampsia-eclampsia with HELLP syndrome are at increased risk of maternal morbidity and mortality. The most common maternal complications in the present study in patients with HELLP syndrome was PPH (28%) and Abruptio 17%. Almost similar incidence of abruption was observed by Haddad¹¹ *et al* and S. Chattopadhyay¹². ARF complicated 11% of pregnancies in present study. Acute renal failure was significantly higher in HELLP syndrome groups in the study one by AbdulKadin Turgut¹³. Abruptio placentae, acute renal failure and DIC were the most frequent maternal complication in patients studied by Vigil De Gracia (14) Gokhan Yildirim *et al*¹⁵ also observed significantly higher maternal morbidity in the HELLP syndrome group than that in the patients with PIH but without HELLP syndrome Maternal mortality rate in present study was 5.5%. Patient died of convulsion with DIC with acute renal shutdown. Risk of maternal loss with HELLP syndrome was reported to be less than 7% (Weinstein (1), Rose *et al*⁸. S. Chattopadhyay¹². Maternal mortality as higher as 24-38% also has been documented by authors (Martin *et al*⁹, Reddi *et al*⁶.

CONCLUSION

Awareness, careful evaluation of the clinical symptoms, early determination of the laboratory parameters, aggressive management and multidisciplinary approach will go a long way in reducing maternal morbidity and mortality in HELLP syndrome.

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