

# Early preeclampsia and HELLP syndrome in a 20 week pregnant patient



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## Abstract

The first time Weinstein in 1982 described patients with the syndrome of hemolysis, elevated liver enzymes, and low platelet count (HELLP) in pregnant preeclamptic and eclamptic patients. This syndrome is a severe form of preeclampsia or eclampsia. Usually HELLP syndrome occurs at the third trimester and only 15% occur before the 27th week of pregnancy and rarely before the 20th week of pregnancy. We want to present a 30-year old parity 2, gravidity 1 pregnant patient who was pregnant for 20 weeks with preeclampsia and HELLP syndrome. Two hours before arriving to the emergency unit, she felt chest discomfort and went to the nearest clinic to visit a physician. She was then referred to the hospital because of high blood pressure (BP). When she arrived to the emergency unit, she had right upper quadrant and epigastric pain, headache, vomiting, dyspnea, and high BP (185/100). Finally the diagnosis of HELLP syndrome was made. As maternal and fetus mortality and morbidity of HELLP syndrome is high, immediate recognition and treatment is vital to save the lives of both the mother and the fetus.

**Keywords:** HELLP Syndrome, Pre-eclampsia, Eclampsia

## Introduction

It was in 1982 that Weinstein described patients with the syndrome of hemolysis, elevated liver enzymes, and low platelet count (HELLP) in pregnant preeclamptic and eclamptic patients (1). This syndrome is a severe form of preeclampsia or eclampsia (2). The prevalence of HELLP syndrome is 0.2%-0.6% (3). Usually HELLP syndrome occurs at the third trimester and only 15% occur before the 27th week of pregnancy and rarely before the 20th week of pregnancy (2,4). We presented a 30-year old parity 2, gravidity 1 pregnant patient who was pregnant for 20 weeks with HELLP syndrome.

## Case report

A 30-year old patient referred to the emergency gynecology unit with HELLP syndrome. Her symptoms began 2 week ago at the 20th week of gestation; with leg swelling (edema) and mild proteinuria (total 24-hour urine protein was 280 milligram). She was visited by a physician frequently. Before pregnancy, her blood pressure (BP), height, weight, and body mass index (BMI) were 100/60, 153, 69, and 29 respectively. Two hours before arriving to the emergency unit, she felt chest discomfort and went to the nearest clinic to visit a physician. She was then referred

to the hospital because of hypertension. During referring to the hospital her condition deteriorated suddenly. When she arrived to the emergency unit, she had right upper quadrant and epigastric pain, headache, vomiting, dyspnea, and high BP (185/100). Initial laboratory findings showed low platelets, liver enzyme rising, hemolysis, and schistocyte on blood smear. First and serial laboratory test results are shown in Table 1. The diagnosis of preeclampsia complicated by the HELLP syndrome was made. The emergency physician immediately began hydralazine 5 mg in repeated doses to control her hypertension and simultaneously obtained laboratory tests. In addition, Prophylactic magnesium sulfate was administered. Although hydralazine was given repeatedly, her sign and symptoms worsened and her hypertension was not controlled. Consequently, the emergency physician decided to terminate the pregnancy and began early delivery. After pregnancy was terminated, her symptoms began to subside and she was admitted in intensive care unit (ICU). In ICU she underwent supportive therapy. After 4 days she was well and she was discharged home.

## Discussion

HELLP syndrome is characterized by hemolytic anemia,



**Table 1.** Laboratory results

Time	AST	ALT	PLT	Hb	Alb	Fib	LDH	PT	INR	PTT	T.bi	D.bi	B.U	Cr
First laboratory tests	107	74	125000	12.4	-	372	372	12	1	34	2	0.9	38	1.1
6 h later	580	364	104000	8.4	2.3	440	1946	13.7	1.3	35	-	-	39	1.1
12 h later	370	323	52000	7.4	2.2	-	1737	13.2	1.1	32	-	-	32	1.1
48 h later	169	192	75000	7.8	2.3	303	870	12	1	29	1.3	.4	19	0.8

Abbreviations: Alb, albumin; AST, aspartate aminotransferase; ALT, alanine aminotransferase; B.U, blood urea; Cr, creatinine; Fib, fibrinogen; Hb, hemoglobin; HCT, hematocrit; INR, international normalized ratio; LDH, lactic dehydrogenase; PLT, platelets; PT, prothrombin time; PTT, partial thromboplastin time; T.bi, total bilirubin; D.bi, direct bilirubin.

**Table 2.** Martin HELLP classification

	Platelets	ALT	Serum LDH
Class I	<50 000/ $\mu$ L	$\geq$ 70	>600 IU/L
Class II	50 000 -100 000/ $\mu$ L	$\geq$ 70	>600 IU/L
Class III	101 000-150 000/ $\mu$ L	$\geq$ 40	>600 IU/L

Abbreviations: LDH, lactic acid dehydrogenase; ALT, alanine.

increased liver enzyme, and decreased platelet count (1). It was first described by Weinstein in 1982. It occurs in pre-eclamptic/eclamptic patients (1). Martine et al described a set of criteria that patients with HELLP syndrome are divided in 3 classes (Table 2) (5). In addition, Sibai divided patients with HELLP syndrome (LDH >600 IU/L, platelet count <100 000/ $\mu$ L, and AST >70 IU/L) to (a) complete HELLP syndrome, and (b) partial HELLP syndrome. Patients with complete HELLP syndrome have all 3 criteria but those with partial HELLP syndrome have only one or two criteria (6). Maternal and fetus mortality and morbidity of HELLP syndrome is high (7). Thus, immediate recognition and treatment is vital to save the lives of both the mother and the fetus. This patient had complete HELLP syndrome and was categorized in class II HELLP. For this patient HELLP and preeclampsia occurred simultaneously.

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### Ethical issues

Confidentiality of patient information was maintained.

### Authors' contributions

FKK and FA managed the patient and GF drafted and revised the manuscript.

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