

# THE ROLE OF THERAPEUTIC PLASMA EXCHANGE IN SEVERE HELLP SYNDROME

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## Introduction

HELLP syndrome (Hemolysis, Elevated Liver enzymes, and a Low Platelet count) is a microangiopathic hemolysis, which develops in 0.1-0.8 % of pregnancies, causes 1.1 % maternal mortality, also substantial fetal morbidity and mortality. Acute renal failure complicates the syndrome occasionally. There is controversy in the literature over whether use of PLEX improves maternal outcomes in HELLP syndrome.

**The aim** of our retrospective observational study was to evaluate the outcome of patients diagnosed with severe HELLP syndrome and treated by post-partum therapeutic PLEX.

Patient	GI complaints	Hypertention	Edema	Proteinuria	Bleeding	PLEX/HD sessions
1	+++	+++	-	+++	-	5/-
2	+	+++	+++	+	-	5/HD
3	+++	+++	+++	++	-	1/-
4	-	+++	-	-	-	2/-
5	++	++	++	+	-	1/-
6	-	+++	-	+	+++	2/-
7	+++	+++	-	+++	-	2/-
8	++	+++	-	+++	-	3/-
9	++	+++	+++	+++	+++	1/HD
10	++	++	-	-	-	1/-

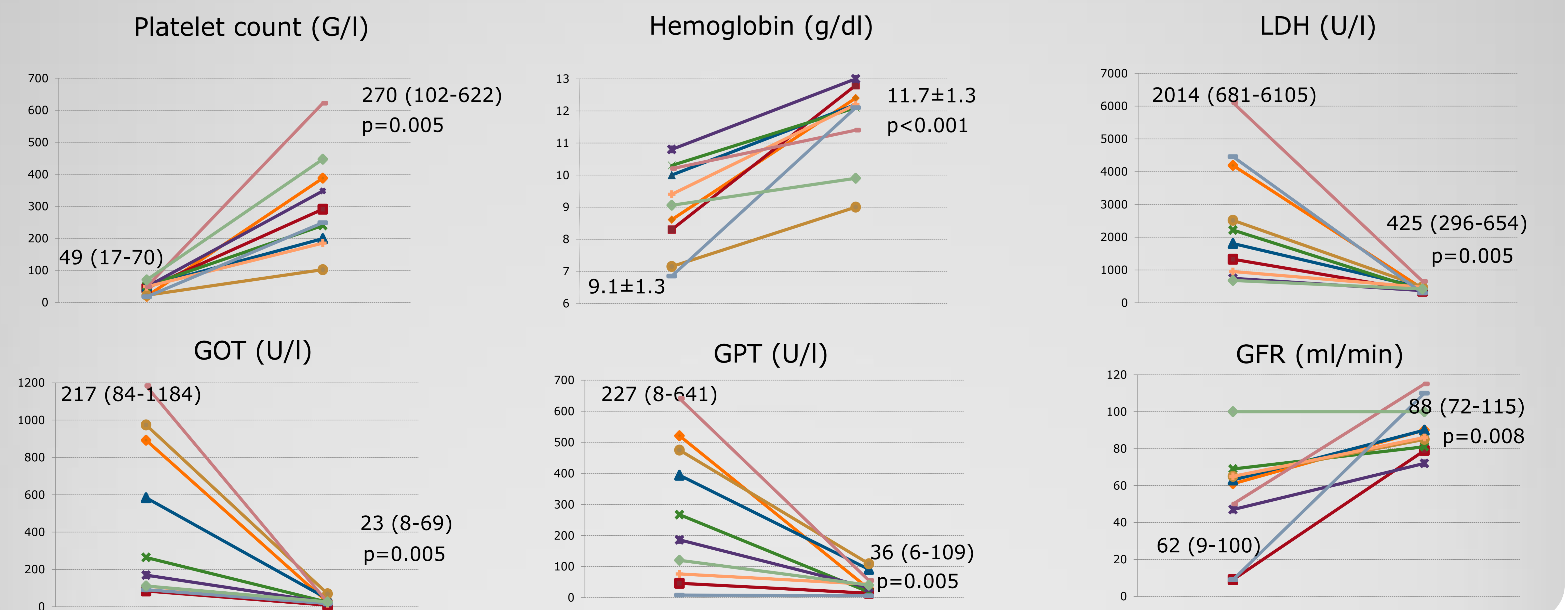
## Methods

Ten patients with severe HELLP syndrome were consulted by our nephrological service between 2001-2015, and treated by post-partum PLEX. Diagnosis was based on the Tennessee classification; other types of thrombotic microangiopathies were excluded. Delivery was induced, and iv dexamethasone was given to everyone. One to five (median 2) PLEX sessions, with 2504±242 ml plasma exchange and fresh frozen plasma substitution were performed, and repeated daily until platelet (PLT) count exceeded 100 000 G/l.

Data are given as mean ± SD or median (range), and analyzed by Student's t-tests or Wilcoxon signed ranks tests.

Patient	Age	No. of pregnancies	Previous abortions	HELLP at pregnancy weeks	Birthweight
1	35	1	1 spont.	after delivery	2200
2	25	1.	1 spont.	38	2450
3	35	2.	0	39	2950
4	31	2 (twins)	1 spont.	36	2050
5	32	1.	0	35	1800
6	39	1	1 artef.	37	2600
7	31	1	2 artef.	36	2300
8	36	1 (twins)	0	36	2575
9	28	1 (twins)	0	36	2575
10	26	1	1 spont.	37	2800

## Laboratory results at diagnosis and after treatment



## Conclusions

In all of our cases quick recovery occurred after therapeutic PLEX, and the lab abnormalities normalized, which may refer to the PLEX's beneficial effects. Since waiting for several days for spontaneous improvement may increase the risk of further maternal morbidity, physicians should consider timely intervention by therapeutic PLEX in severe cases of HELLP. Further investigations in prospective trials are required to establish the clear indication of PLEX in severe HELLP syndrome.