

HELLP syndrome and severe preeclampsia – are there any differences in maternal and perinatal outcomes?

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BACKGROUND

- Preeclampsia (PET) and Haemolysis, Elevated Liver enzymes and Low Platelets (HELLP) syndrome complicates 2-8% and 0.2-0.8% of pregnancies respectively, and are leading causes of maternal and perinatal morbidity and mortality^{1,2}
- The diagnosis of PET requires hypertension and one or more of proteinuria, renal insufficiency, liver function abnormalities, neurological complications, haematological complications and uteroplacental insufficiency³
- The Tennessee classification system of HELLP syndrome requires haemolysis, elevated lactate dehydrogenase (LDH) >600 IU/L and aspartate aminotransferase (AST) >70 IU/L and thrombocytopaenia (<100 x 10⁹ L⁻¹)²

AIM

This study was performed to compare maternal and fetal outcomes in women with severe PET and HELLP syndrome.

METHODS

- Retrospective observational study carried out at a tertiary centre, the Royal Brisbane and Women’s Hospital, Australia
- 249 women identified as having severe PET or HELLP syndrome; 209 women met inclusion criteria
- Inclusion criteria: ISSHP criteria for severe PET, Tennessee Classification for HELLP syndrome

RESULTS

- 1. Maternal outcomes**
- No differences between outcomes of pulmonary oedema, AKI, placental abruption or intensive care unit admission
 - Disseminated intravascular coagulation (DIC) and liver haematomas were more common in women with HELLP syndrome
 - Women with HELLP syndrome were more likely to require a platelet transfusion
- 2. Perinatal outcomes**
- Perinatal mortality was more common in the HELLP group, however this was not statistically significant
 - There was no significant difference in neonatal morbidity between the two groups

Table 1: Comparing maternal outcomes between those with severe preeclampsia and HELLP syndrome

	Severe PET N = 152	HELLP syndrome N = 57	P value
Estimated blood loss (mL) - mean +/- standard deviation	505 (+/- 424)	632 (+/- 572)	0.06
Platelet transfusion	0.66%	14.04%	<0.0001
Blood transfusion	3.95%	7.02%	0.35
Acute pulmonary oedema	6.6%	1.8%	0.16
Acute kidney injury	21.1%	17.9%	0.51
DIC	0%	3.5%	0.02
Intensive Care Unit admission	4.6%	7.0%	0.49
Placental abruption	3.3%	5.3%	0.51
Liver haematoma	0%	3.5%	0.02
Maternal morbidity	34.2%	31.6%	0.72

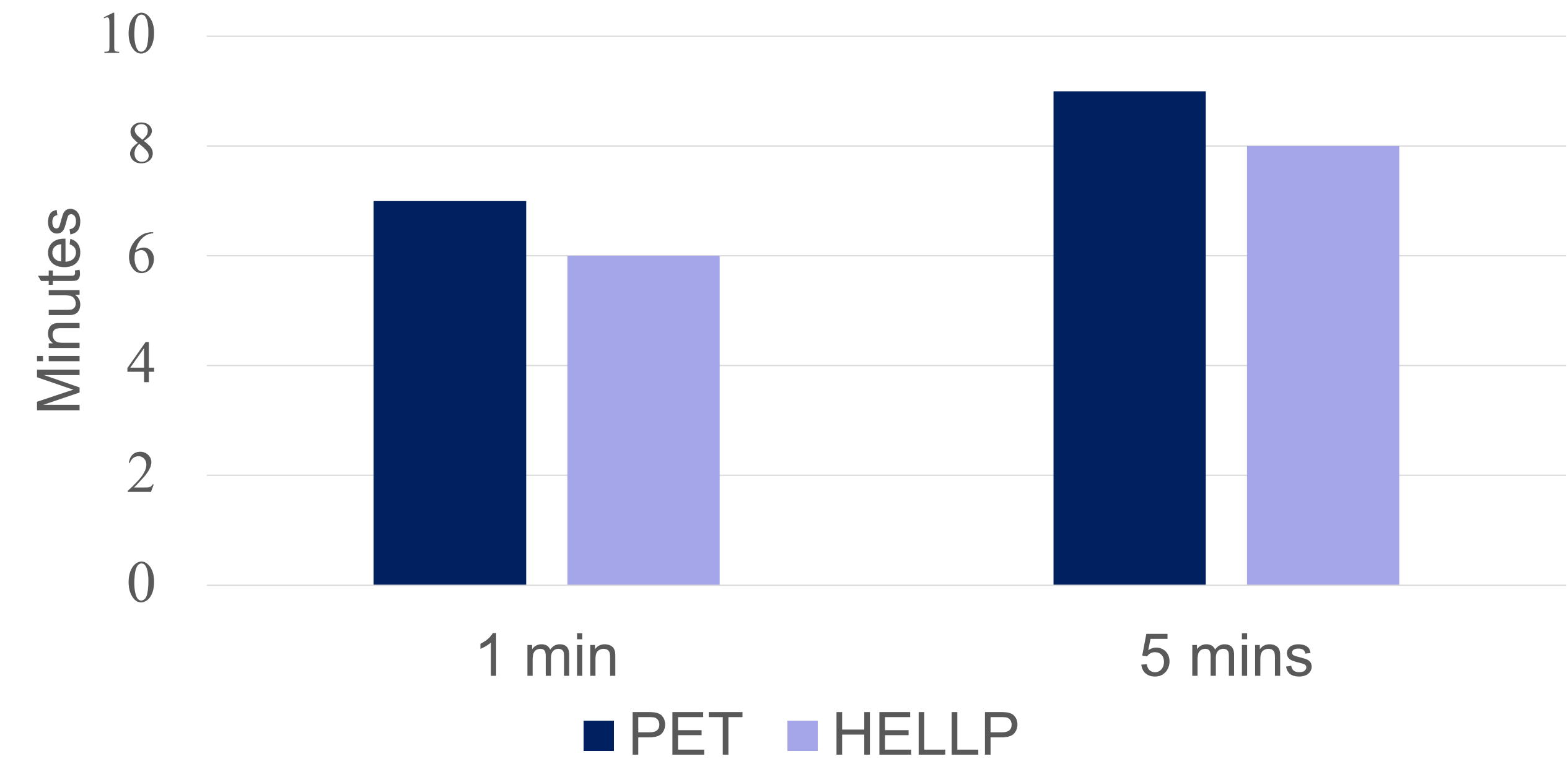
Table 2: Comparing perinatal outcomes between those with severe preeclampsia and HELLP syndrome

	Severe PET N = 162	HELLP syndrome N = 58	P value
Intrauterine growth restriction	50.0%	38.6%	0.14
Perinatal mortality	5.9%	10.5%	0.25
Intraventricular haemorrhage	5.6%	3.5%	0.54
Necrotising enterocolitis	5.6%	0%	0.07
Respiratory distress syndrome	50.0%	50.9%	0.91
Retinopathy of prematurity	18.5%	17.5%	0.87

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Apgars at 1 and 5 minutes



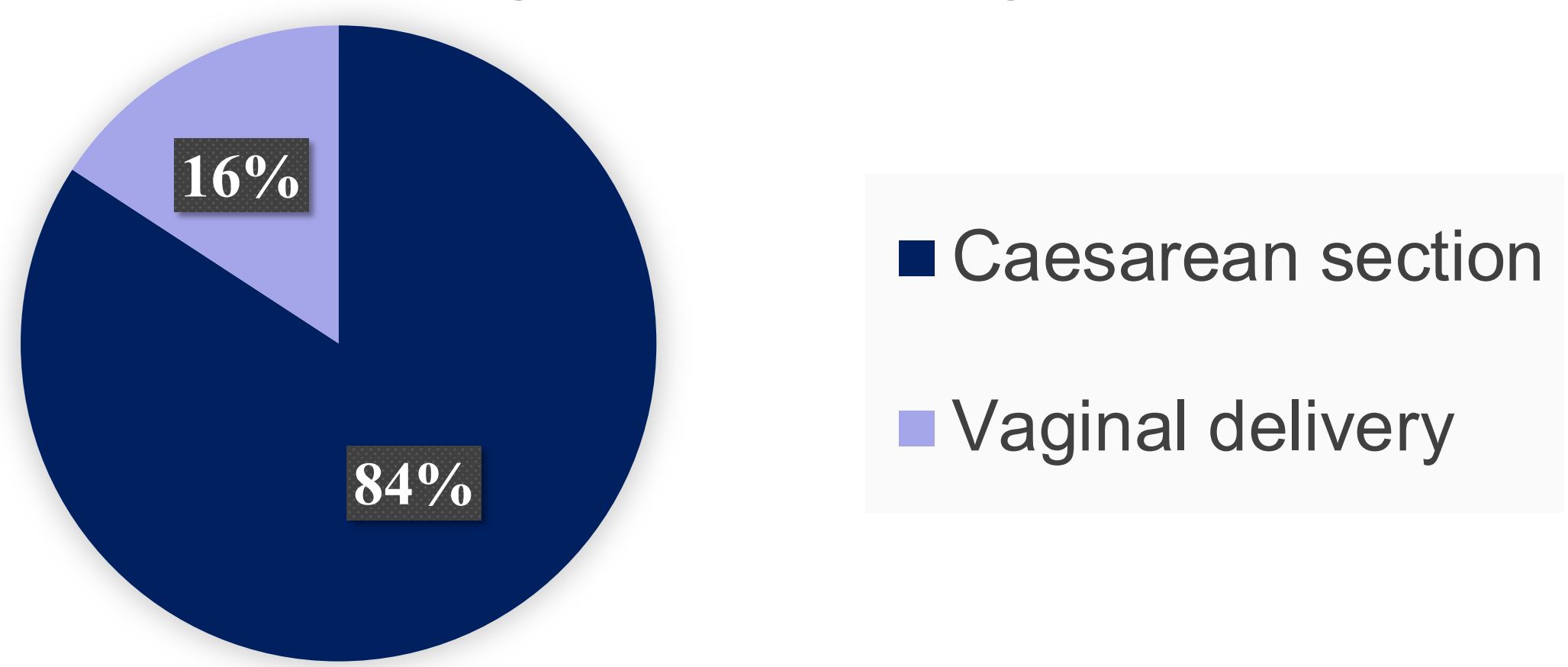
DISCUSSION AND CONCLUSION

- This study demonstrates that overall maternal morbidity is not significantly different between women with severe PET and HELLP syndrome
- This could be due to prompt recognition and delivery in women with HELLP syndrome compared to waiting for maternal/fetal indications to deliver in severe PET
- Similarly to previous studies, perinatal mortality was more common in HELLP syndrome, however this was not significant

Mode of delivery for PET



Mode of delivery for HELLP syndrome



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