

Utility of 1st-trimester preeclampsia workup in women with a history of preeclampsia

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Introduction

Hypertensive disorders of pregnancy (HDOP) are one of the most common complications of pregnancy and are implicated in up to 15% of global maternal deaths as well as fetal complications including growth restriction and preterm birth. Prior history of preeclampsia (PEC) increases a woman's risk of HDOP eightfold. Liver enzymes, LDH, creatine, and platelets can be abnormal in more severe HDOP including preeclampsia. Despite a lack of recommendations, some providers routinely perform a "baseline" preeclamptic workup in women with a history of preeclampsia.

Methods

- Retrospective observational study
- Inclusion criteria: Women with a history of HDOP in a previous pregnancy who delivered at our institution for their subsequent pregnancy
- Chi-square tests, t-tests, non-parametric tests, and logistic regression were used where appropriate.

Results

- 194 women were included in the study
- 46.9% had gestational hypertension or PEC without severe features in a previous pregnancy, 42.3% had PEC with severe features, 9.3% had superimposed PEC, and 1.5% had eclampsia.
- 46.4% of these women developed a hypertensive disorder in the subsequent pregnancy.
- 33.5% of women had a baseline workup performed, which was similar across diagnosis groups.
- None of the women had abnormal liver enzymes, LDH, or platelet values, while one had an elevated creatinine.
- A 24-hour urine protein was ordered in 45 (23.2%) women and abnormal in three (6.7%).

Conclusion

- Women with a history of HDOP did not have abnormal labs in the 1st-trimester. Our research suggests that this screening offers no clinical value.
- The literature supports the assessment of proteinuria in the first trimester, especially in women with chronic hypertension, but few women in our cohort (23.2%) completed the 24-hour urine collection



Patient Characteristics

Table 1. Patient Characteristics

Age at index delivery (yrs)	
GA at index delivery (wks)	
Race	
White	1
Black	
Asian	
Hispanic	
Other	

1st Trimester Preeclampsia Work-up

	Figu
	100%
	90%
	80%
22 50/	70%
JJ.J/0	60%
Of Women had	50%
1 st Trimester Labs	40%
Ordorod	30%
Uldeled	20%
	10%
	0%

Chronic Hypertension in Subsequent Pregnancy

Figure 4. HDoP Diagnosis in Index Pregnancy 20.5% 20.1% 43.6% Of Women had CHTN in Subsequent 28.2% Pregnancy





ure 3. Percent of Women with Labs Ordered by Diagnosis





 Table 3. 1st Trimester Labs Results

	Lab Ordered	Lab Abnormal
ALT	50 (76.9)	0 (0)
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LDH	21 (32.3)	0 (0)
Platelets	65 (100)	0 (0)
Creatinine	58 (89.2)	1 (1.5)

Table 4. 1st Trimester Labs in Women with CHTN Dx

	N= 39
st Trimester Labs Ordered	18 (46.2)
st Trimester Labs Abnormal	0 (0)
24-Hour Urine Ordered	15 (38.4)
24-Hour Urine Abnormal	2 (13.3)