

# Introduction

Preeclampsia is a multisystem progressive disorder characterized by the new onset of hypertension and proteinuria or the new onset of hypertension plus significant end-organ dysfunction with or without proteinuria, typically presenting after 20 weeks of gestation or postpartum. Incidence: About 4.6 % of pregnancies worldwide are complicated by preeclampsia. Variations in incidence reflect differences in the maternal age distribution and proportion of nulliparous patients in the population. The incidence is increasing, likely related to population-level increases in risk factors for the disease. According to severity, preeclampsia is classified into non severe and severe. Labetalol is a selective alpha blocker and a nonselective beta blocker that produces vasodilatation and results in a decrease in systemic vascular resistance. Resveratrol 3,5,40-trihydroxy-trans-stilbene an antioxidant polyphenolic compound found in various plants and foods including grapes. Resveratrol can induce uterine arteries relaxation during PE pathological events.

# Aim of the work

The present study was designed to evaluate the effect of adding Resveratrol to labetalol in the treatment of severe preeclampsia through assessment of changes in blood pressure and the time needed for adequate control of blood pressure before termination of pregnancy.

# Patients and Methods

This is a prospective study that was conducted at the Department of Obstetrics and Gynecology of Shatby university Hospital, Alexandria on 80 patients diagnosed with severe preeclampsia after taking their informed written consent from August 2022 till September 2023. Patients were assigned into two groups: group I (40 patients) received Labetalol and Resveratrol while group II (40 patients) received Labetalol only. Patients were admitted to the preeclampsia care unit and were subjected to:

- 1. History taking and full clinical examination.
- 2. Ultrasound for fetal biometry, fetal weight and liquor assessment.
- 3. Doppler ultrasound of umbilical and middle cerebral arteries of the fetus.
- 4. Stabilization of blood pressure
- 5. Patients received full medical care for severe preeclampsia to prevent complications to the mother and the fetus
- 6. Follow-up of maternal and fetal outcome in both groups

# Results

Table 1: Comparison between the two studied groups according to the effect of adding resveratrol to the treatment on group I

	Group I (n = 40)	Group II (n = 40)	U	p
Time till blood pressure Reached 150/100 in (min)				
Min. – Max.	30.0 – 120.0	30.0 – 180.0	333.500*	0.001*<
Mean ± SD.	45.75 ± 24.25	70.87 ± 32.93		
Median (IQR)	30.0 (30.0 – 45.0)	60.0 (45.0 – 90.0)		
Time till delivery in (hours)				
Min. – Max.	9.0 – 60.0	2.0 – 48.0	326.50*	<0.001*
Mean ± SD.	19.68 ± 15.85	12.43 ± 16.76		
Median (IQR)	12.0 (10.5 – 16.0)	3.0 (2.0 – 20.0)		

Table 2: Comparison between the two studied groups according to maternal complications

Maternal complications	Group I (n = 40)		Group II (n = 40)		$\chi^2$	FEp
	No.	%	No.	%		
No complications	36	90.0	35	87.5	0.125	1.000
Occurrence of HELLP	4	10.0	5	12.5		

# Conclusion

Combination treatment in patients with severe preeclampsia by Resveratrol and labetalol decreases the time needed to control blood pressure and increase duration before termination of pregnancy with no effect on mode of delivery nor maternal or fetal complications