

EP16.40

LONGITUDINAL CHANGES IN THE MATERNAL HEMODYNAMIC PROFILE IN WOMEN AT HIGH-RISK OF PRE-ECLAMPSIA AND PERINATAL OUTCOMES

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Introduction

Preeclampsia is a leading cause of maternal and perinatal morbidity. Early hemodynamic changes may reveal women at highest risk, and profiling cardiac function together with systemic vascular resistance could improve monitoring strategies and guide preventive interventions.

Objectives:

To evaluate the relationship between maternal-fetal hemodynamic profiles and perinatal outcomes in high-risk pregnancies for pre-eclampsia treated with aspirin in a reference obstetric center in Medellín, Colombia.

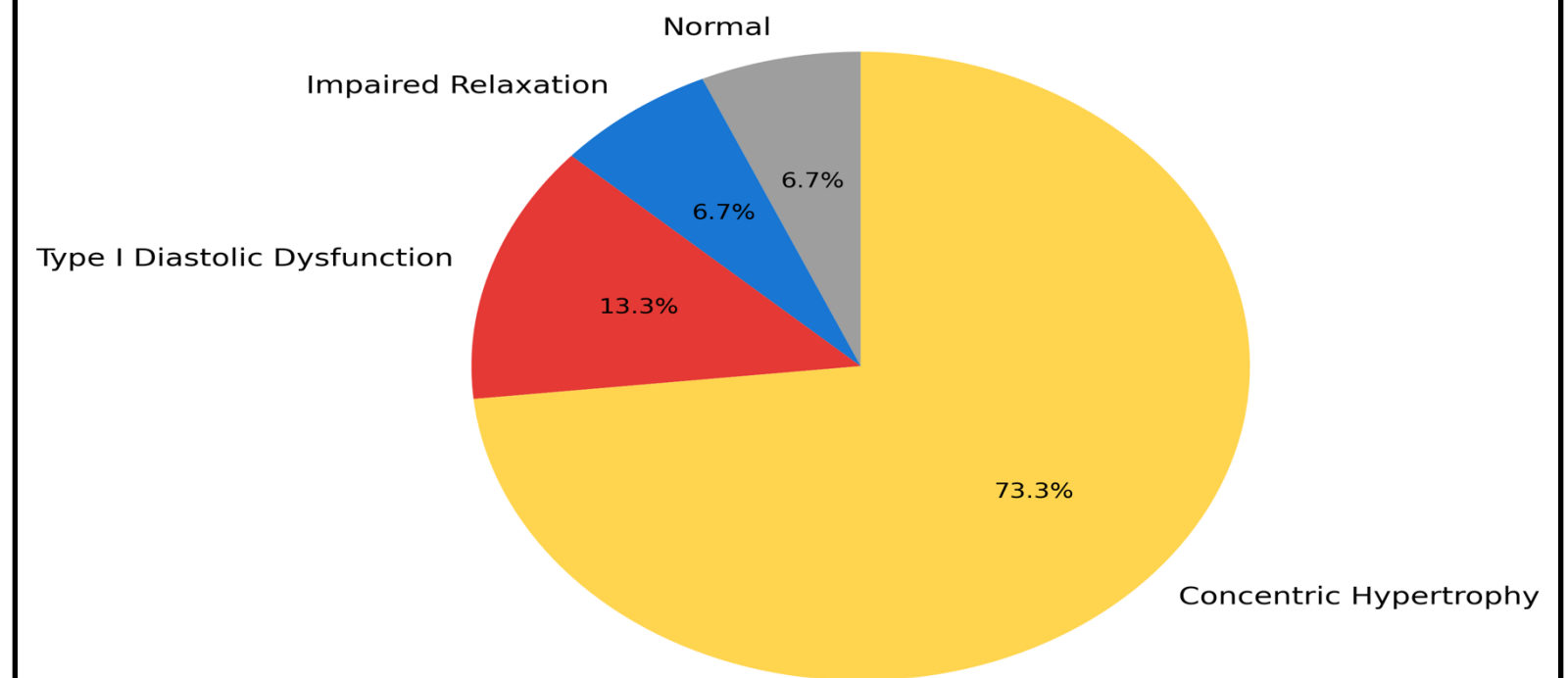
Methods:

Prospective cohort study (Feb–Oct 2024). High-risk pregnancies for pre-eclampsia treated with aspirin. Inclusion during 2nd trimester. Sequential maternal and fetal echocardiography + SVR at 26 & 36 weeks. Follow-up at delivery and postpartum to assess maternal and perinatal outcomes.

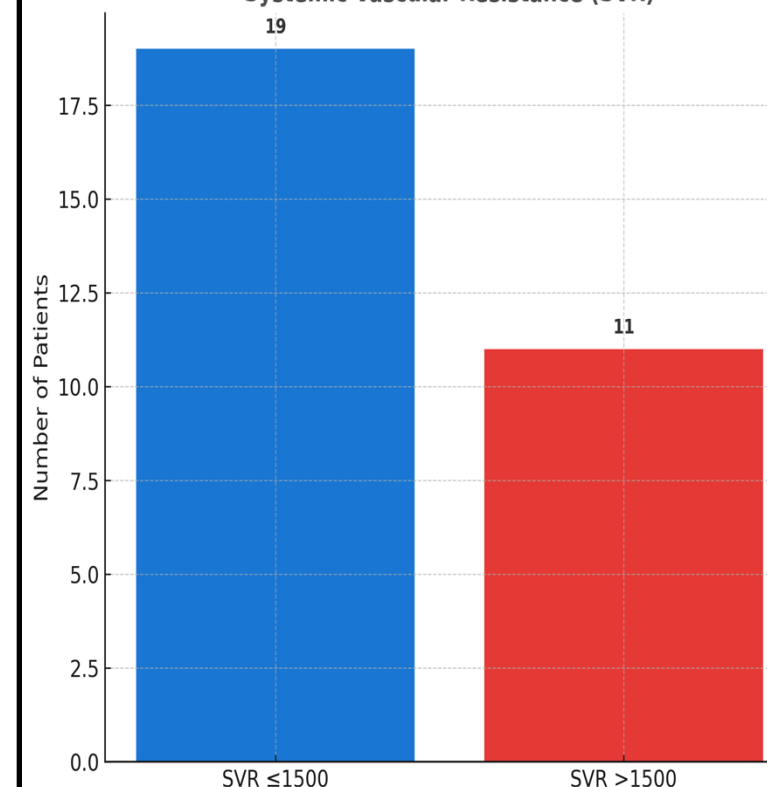
Results:

- 30 pregnant women were included.
- Most frequent alteration: **concentric hypertrophy** (73.3%).
- 36.6%** with SVR >1500.
- 36.6% hypodynamic profile**, associated with higher C-section rate but good neonatal adaptation.
- Diastolic dysfunction associated with **multigestation, age >28, BMI >35**.
- Fetal echocardiography normal; mean GA at birth **38 weeks**.

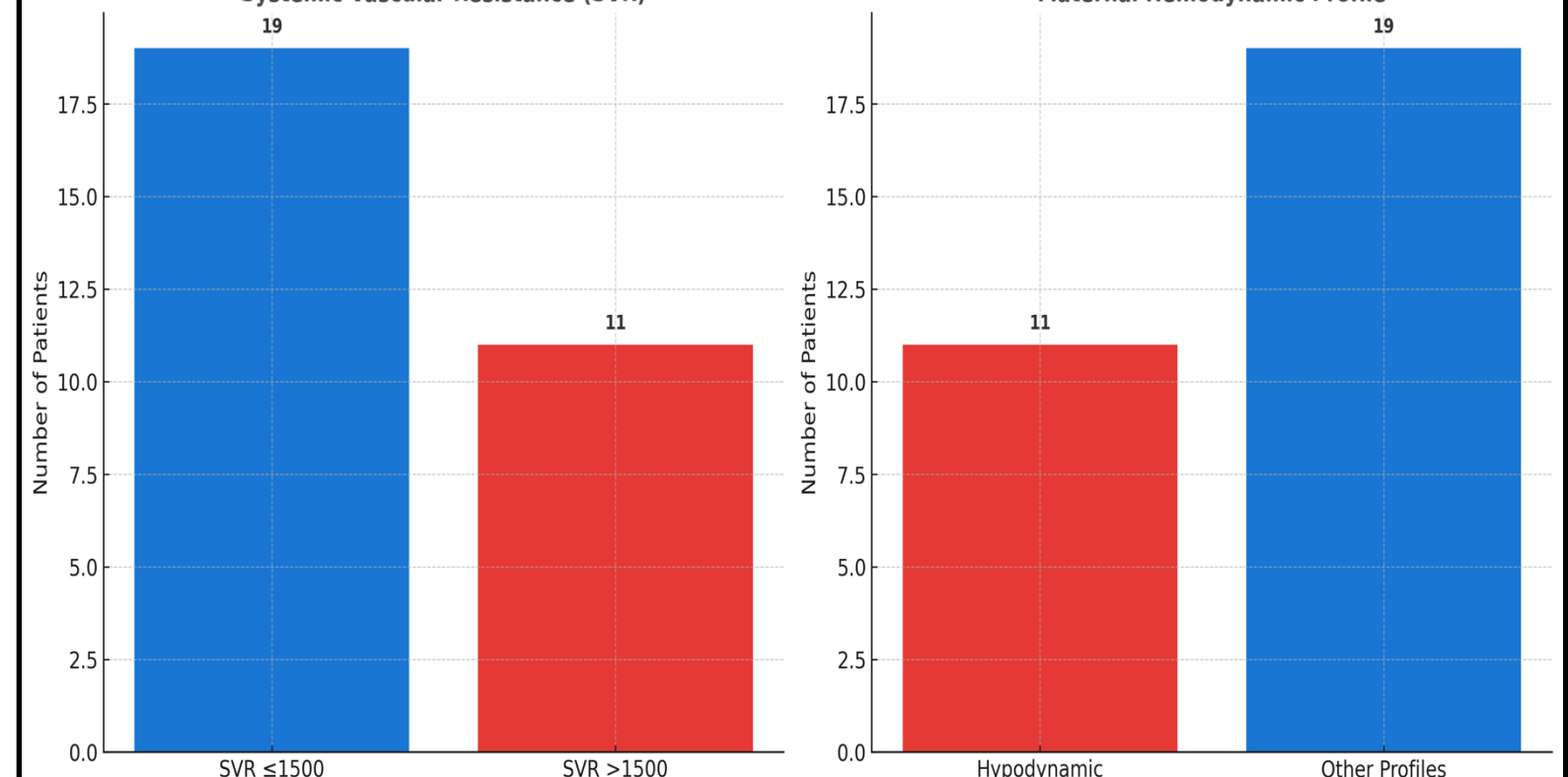
Echocardiographic Findings



Systemic Vascular Resistance (SVR)



Maternal Hemodynamic Profile



Conclusions: Pregnants with high-risk pre-eclampsia who are in treatment with pre-eclampsia, display an hemodynamic profile, characterized by normal or low cardiac output and elevated systemic vascular resistance, which might be used as a tool for monitoring and anticipate adverse maternal outcomes.