

## **Fetal growth restriction in preeclamptic pregnancy as a predictor of adverse neonatal outcomes**

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### **Objective**

To evaluate that the presence of intrauterine fetal growth restriction (IUGR) in preeclampsia is a predictor of adverse neonatal outcomes.

### **Methods**

This is a retrospective study conducted from January 2020 to December 2020 at the University Hospital of Obstetrics and Gynecology "Queen Geraldine "of Tirana. We included in the study 144 patients with preeclampsia. We compared two groups of study population: the group of preeclampsia with IUGR and preeclampsia without IUGR. The perinatal outcome variables were: neonatal birth weight, APGAR score of  $\leq 7$  at 5 minutes, admission to NICU, abnormal Doppler velocimetry, very low birth weight, and perinatal death among the two groups. The values of  $p < 0.05$  were considered significant.

### **Results**

Results: The group with preeclampsia associated with IUGR (14 cases) was significantly associated with poor perinatal outcomes. This group had a higher risk for perinatal death (64.2% vs. 11.5%,  $\chi^2 6.17$ ,  $p.003$ ), lower gestational age at delivery (35.5 vs. 36.8 weeks), more neonates with gestational age at delivery less than 34 weeks (78.5% vs. 33.0%,  $\chi^2 11.16$ ,  $p.002$ ), lower birth weight (1995g vs. 2502.1g,  $t -1.92$ ,  $p.003$ ), more neonates with very low birth weight (64.2% vs. 25.3%,  $\chi^2 9.2$ ,  $p.006$ ), more neonates had lower APGAR score at 5 minutes (71.4% vs. 26.6%,  $\chi^2 11.1$ ,  $p.0008$ ), higher risk for admission to the neonatal intensive care unit (78.5% vs. 18.4%,  $\chi^2 24.8$ ,  $p.00001$ ), more neonates with absent reverse end diastolic flow in Doppler velocimetry (64.2% vs. 26.9%,  $\chi^2 8.3$ ,  $p.009$ ).

### **Conclusion**

We found an evident association between preeclampsia with IUGR and poor neonatal outcomes. The presence of IUGR in preeclampsia predicts worse perinatal outcomes.