

Preeclampsia and intrauterine growth restriction: morphological changes in placenta

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Objective

To determine the macro and microscopic morphologic differences in placenta of patients with preeclampsia or intrauterine growth restriction with those of healthy patients.

Methods

A retrospective, observational and comparative case- control study. The databases of the Maternal Fetal Medicine service of the National Institute of Perinatology (INPer) from February 2018 to March 2020 were reviewed for patients with singleton pregnancy and diagnosis of early preeclampsia or early growth restriction and termination of pregnancy at the National Institute of Perinatology. Data analysis was performed in the statistical program SPSS version 25. Categorical variables were compared between groups with χ^2 and the results were represented in percentages. For the analytical statistical evaluation, ANOVA for an independent sample was used to contrast the associations between the various variables.

Results

Fifty-two patients were included and divided into: group 1: early preeclampsia without intrauterine growth restriction (n = 13), group 2: preeclampsia and early intrauterine growth restriction (n = 13), group 3: early intrauterine growth restriction (n = 13) and group 4 (control) healthy patients (n = 13). A statistically significant difference in placental weight was demonstrated, with a p value < 0.05 but no difference in umbilical cord diameter among the four groups.

Conclusion

Placental histopathologic study is an opportunity to obtain detailed information on the pathophysiologic basis of the disease and thus provide accurate counseling and follow-up to the patient and neonate.