

Analysis of the Association of Preeclampsia with Polymorphisms of the *INS*, *INSR* and *IRS1* Genes in Mexican Women

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Key Words

Preeclampsia _ Metabolic syndrome _ DNA polymorphism

Abstract

Background/Aims: It has been proposed that preeclampsia is a metabolic syndrome of pregnancy. The polymorphisms *Pst* I and *Mae* III of *INS*, *Nsi* I of *INSR* and Ala513Pro and Gly972Arg of *IRS1* have been associated with metabolic syndrome; moreover, the products of these genes are functionally contiguous during insulin signaling. The aim of this study was to assess whether these polymorphisms are associated with preeclampsia. **Methods:** 46 normotensive pregnant women and 43 preeclamptic patients were included in the study to develop a clinical, biochemical and genotypic profile of preeclampsia. Clinical evaluation consisted of measurement of blood pressure, height and weight. Peripheral blood samples were collected for determination of fasting glucose and insulin concentrations and for extraction of genomic DNA. Proteinuria was determined. Polymorphisms were detected using PCR-RFLP. **Results:** The normotensive and preeclampsia groups did not differ significantly in clinical and biochemical traits, except for systolic and diastolic blood pressure ($p \neq 0.0001$). Polymorphisms previously associated with metabolic syndrome in Mexican populations were not associated with preeclampsia in Mexican women ($p \geq 0.05$). **Conclusion:** The lack of an association between preeclampsia and the polymorphisms studied suggests that other genes whose products do not have direct functional interaction with metabolic syndrome or epigenetic factors may play a role in preeclampsia.