INHIBIN-A AND C-REACTIVE PROTEIN IN PREECLAMPSIA AND INTRAUTERINE GROWTH RESTRICTION

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OBJECTIVE: To determine the possible role of inhibin-A and C-reactive protein to predict and to monitor the course of intra uterine growth restriction and preeclampsia.

STUDY DESIGN: In a longitudinal prospective study performed at the Department of Gynecological Sciences and Human Reproduction of Padua, serum inhibin-A and CRP levels were measured in 196 pregnant women at 20-22 and at 30-32 weeks of gestation. 151 women had a physiological pregnancy (control group), 45 developed preeclampsia (pathological group), 14 of the pathological pregnancies had early-onset disease and fetal growth restriction (early-onset group). Mean inhibin-A and CRP values were compared in pathological and control groups using t-test. Correlation between inhibin-A levels at 20-22 weeks, birth weight and gestational weeks at delivery were obtained using logistic regression models. ROC curve was used to evaluate the best cut-off of inhibin-A at 20-22 weeks to predict preeclampsia and fetal growth restriction.

RESULTS: Between the control group and the pathological group, statistically significant differences of inhibin-A values ($p= 0.005$) but not of CRP values were found at 20-22 w.g. This significance was particularly high in women with early-onset disease ($p= 0.000$). CRP rose in a statistically significant way at 30-32 w.g. in pathological pregnancy ($p= 0.000$). Inhibin-A values showed a statistically significant inverse correlation with birth weight in whole population ($p< 0.0001$). Using a cut-off of Inhibin-A = 450 pg/ml at 20-22 w.g. the test had a great sensibility (85.7%) and sensitivity (94.0%) to identify the development of early-onset disease.

CONCLUSION: Elevated maternal Inhibin-A concentration in the second trimester showed to be a good predictor of intra uterine growth restriction associated to early-onset preeclampsia. C-reactive protein could be a good marker of established pathology and could be used to monitor the course of the disease.

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