Comparison of Maternal Serum Angiogenic Growth Factors in Pregnancies Ending in Intrauterine Growth Restriction with Normal Pregnancies in Srinagarind Hospital, Khon Kaen University, Thailand

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Objective: To compare the level of Angiogenic growth factors in blood stream with soluble fms-like tyrosine kinase-1(sFlt-1), placenta growth factor(PlGF) and sFlt-1 to PlGF ratio of pregnant women whose fetus has intrauterine growth restriction(IUGR) status at Srinagarind hospital.

Material and Methods: This was a cross-sectional prospective descriptive study. 21 pregnant women without IUGR singleton pregnancy(control group) and 21 pregnant women IUGR singleton pregnancy(case group) with more than 26 weeks of gestation from July 2014 to April 2015 were enrolled in this study. SPSS version 16.0 was used to analyse the data. The Main outcome measures were level of Angiogenic growth factors between IUGR and normal pregnancy.

Results: Mean±S.D. of PlGF in IUGR group and control group were 308.04±365.77ng/ml and 834.53±526.19ng/ml, respectively and wab significantly different(p-value 0.0003), sFlt-1 in IUGR group and control group were 6222.85±7320.60 ng/ml and 2659.77±1674.31ng/ml respectively and was non significantly different (p-value 0.1047) and sFlt-1/PlGF ratio in IUGR group and control group were 111.01±183.29 and 7.06±10.82 respectively and was significantly different (p-value 0.0012).

Conclusion: The pattern of PlGF and sFlt-1/PlGF ratio of IUGR cases can be used to predict pregnancy with IUGR.

Keywords: Intrauterine growth restriction(IUGR), Low birth weight, Angiogenic growth factors, soluble fms-like tyrosine kinase-1(sFlt-1), placenta growth factor(PlGF).