EFFECT OF LYCOPENE ON sFlt-1/PlGF RATIO IN PRE-ECLAMPSIA INDUCED PLACENTAL TROPHOBLAST CELLS

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BACKGROUND

Lympene, known to possess antioxidant properties and to maintain body stability in spite of changes, is therefore a promising agent to decrease preeclampsia risk.

METHOD

• This study aimed to observe lycopene on sFlt-1/PlGF ratio in placental trophoblast which is induced by preeclampsia in vitro.
• Level of sFlt-1 and PlGF was measured with ELISA method.
• Data was analyzed with T-test if normally distributed, and Mann Whitney test if not normally distributed. Data was quantitatively analyzed with ANOVA DMRT (Duncans’s Multiple Range Test) to determine the significance among variables in each treatment SPSS 14.

RESULT

In preeclampsia-induced trophoblast, sFlt-1/PlGF ratio decreased (p<0.001) after treated with lycopene of 15.625 μg/ml incubated for 24 hours. Lycopene possess high antioxidant and balance in angiogenesis factor that plays role as precursor in scavenging reactive oxygen and reduce free radicals that recover trophoblast cells induced by preeclampsia as indicated by increase in PlGF level. Further studies regarding the optimal concentration of lycopene on embryo cell for clinical trial, are encouraged.

REFERENCES