Expression of SFLT-1 and PLGF in the FGR cases and the intervention mechanism of tetramethylpyrazine.

LING YI, JIN Song, LIN Ye-fei, Hu CX, YI GH
Department of Obstetrics and Gynecology, Affiliated Hospital of Hainan Medical University, Haikou 570201, China

OBJECTIVE

• To investigate the expression of soluble vascular endothelial growth factor receptor-1 (SFLT-1) and placental growth factor (PLGF) in the fetal growth restriction (FGR) cases;
• To investigate the intervention mechanism of tetramethylpyrazine.

RESULTS

• Expression level of SFlt-1 and PLGF in group A was not significantly different from that of group C (P > 0.05);
• Significant difference in SFlt1 and PLGF expression level was observed between group C and group B (P < 0.05).
• Before treatment, group A and group B showed significant lower HC, AC, FL, BPH and EFW comparing with group C;
• After treatment, those parameters in group A were significantly improved (P < 0.05).

METHODS

• A total of 60 fetal growth restriction cases were randomly divided into Ligustrazine intervention group (group A) and nutritional support group (group B).
• 50 healthy pregnant women were also enrolled as control group (group C).
• Expression level of maternal serum sFlt1, PLGF and fetal growth parameters including HC, AC, FL, BPD, EFW as well as placenta PLGF, sFlt-1 mRNA expression were recorded and compared among the three groups.
• The animal experiment to control, a total of 15 SD rats were selected and were divided into three groups, TMP group, alcohol and tobacco group and blank control group.
• Measuring the expression level of sFlt1, PLGF in the placenta of rats and analyzing the result.

CONCLUSIONS

• PLGF level decreased and sFlt-1 increased in patients suffered from fetal growth restriction;
• FGR rats show increased SFLT-1 and decreased PLGF;
• they can be indicator of the fetal growth restriction;
• Ligustrazine can effectively improve sFlt-1, PLGF expression level in fetal growth restriction cases, which can be used as treatment for FGR.