

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

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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.

METHODS

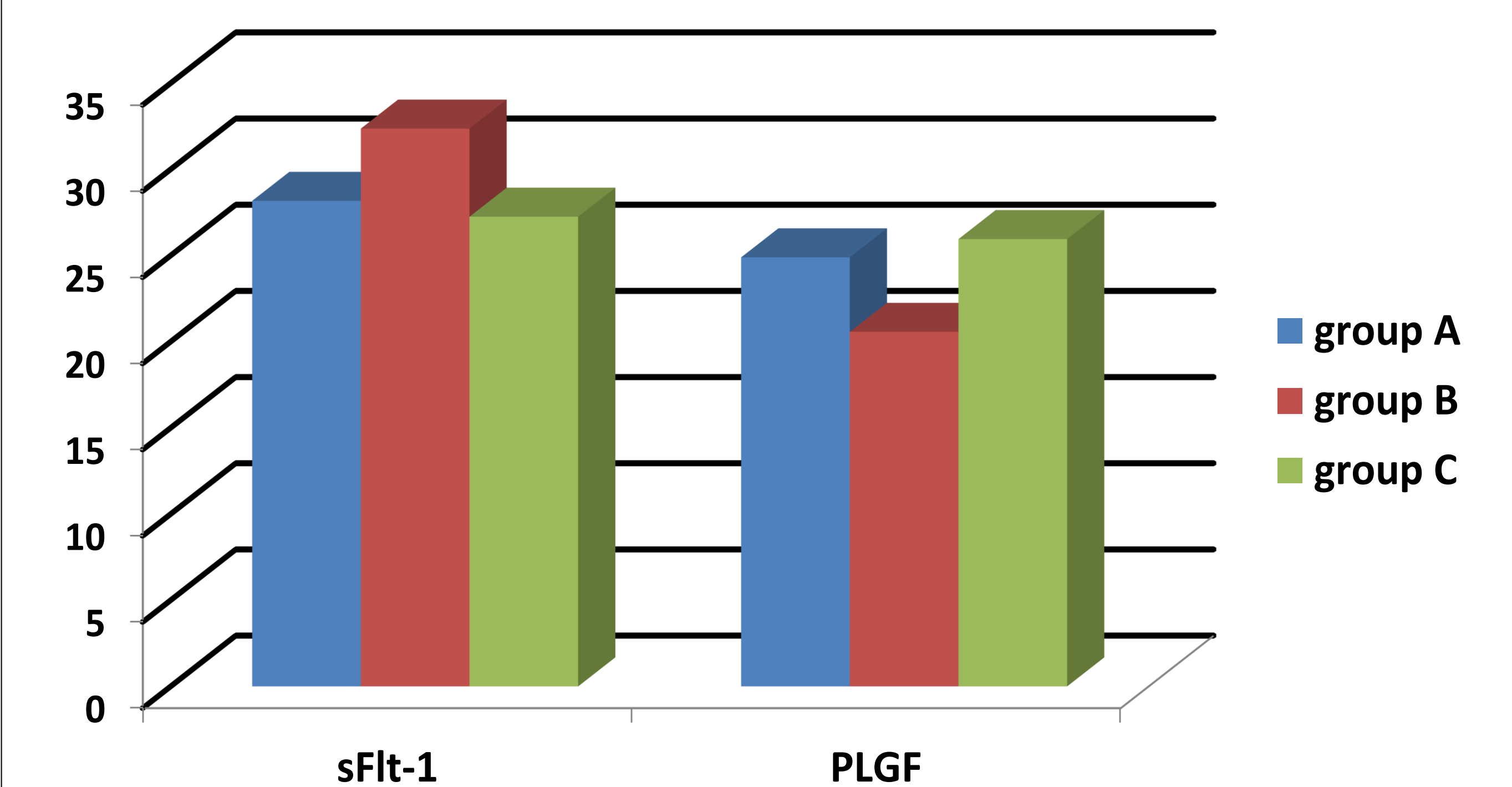
- A total of 60 fetal growth restriction cases were randomly divided into Ligustrazine intervention group (group A) and nutritional support group (group B).
- 50 healthy pregnant women were also enrolled as control group (group C).
- Expression level of maternal serum sFlt1,PLGF and fetal growth parameters 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.

RESULTS

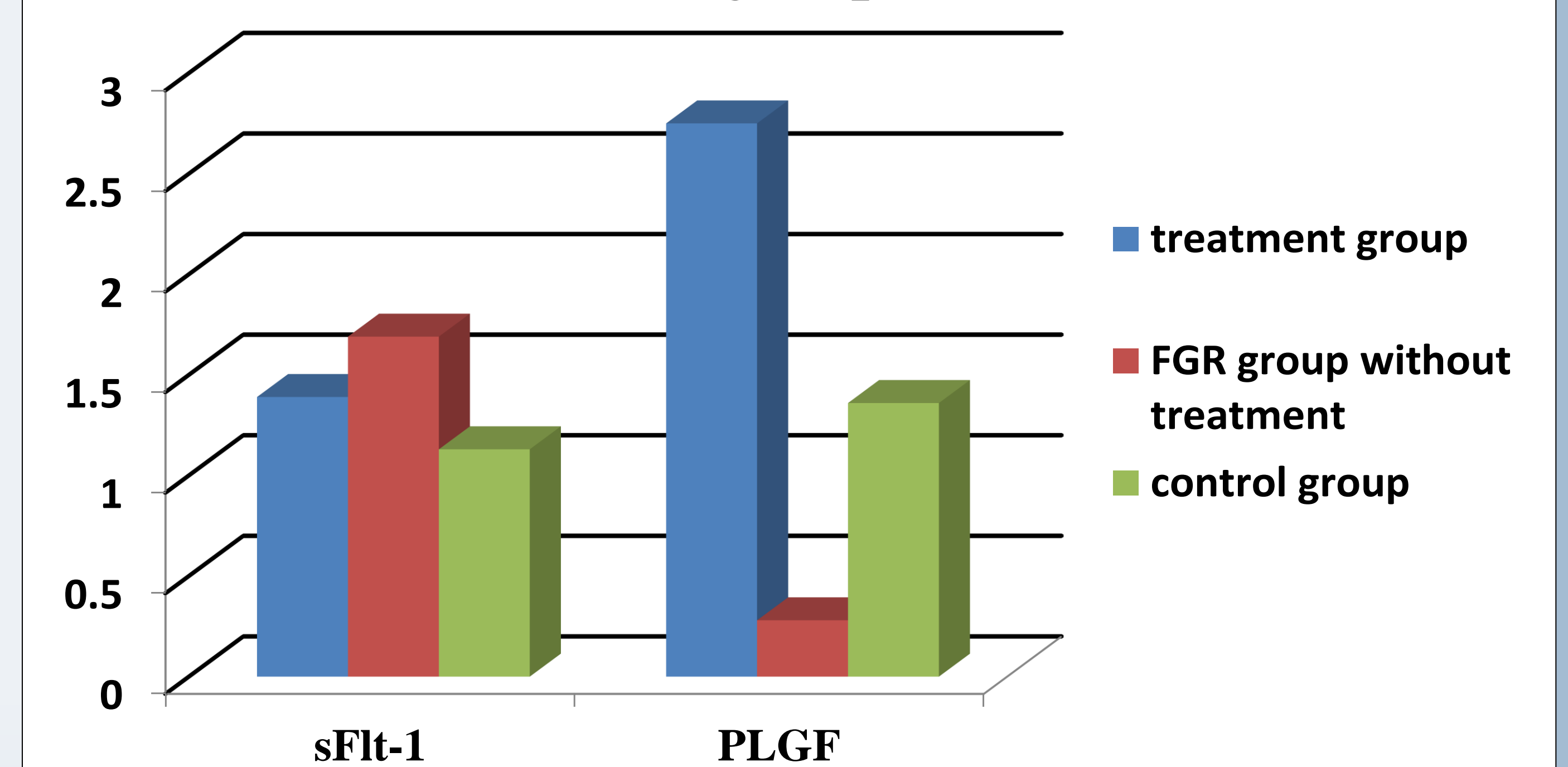
- Expression level of SFlt-1 and PLGF in group A was not significantly different from that of group C ($P > 0.05$);
- Significant difference in SFlt1 and PLGF expression level was observed between group C and group B ($P < 0.05$).
- Before treatment, group A and group B showed significant lower HC, AC,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

- In the animal experiment there was no significant difference in SFLT-1 between treatment group and FGR group without treatment or control group ($P > 0.05$);
- There was significant difference in PLGF between FGR group with treatment and FGR group without group or control group ($P < 0.01$).

Expression level of sFlt-1 and PLGF in three groups



Expression level of sFlt-1 and PLGF in three groups of rats



CONCLUSIONS

❖ PLGF level decreased and sFlt-1 increased in patients suffered from fetal growth restriction;

❖ they can be indicator of the fetal growth restriction;

❖ FGR rats show increased SFLT-1 and decreased PLGF;

❖ Ligustrazine can effectively improve sFlt-1,PLGF expression level in fetal growth restriction cases,which can be used as treatment for FGR.