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EFFECTS OF QI SUPPLEMENT AND BLOOD ACTIVATION PRESCRIPTION AND ITS DISASSEMBLED PRESCRIPTIONS MEDICATED SERUM ON THE EXPRESSION OF RECEPTOR FLK-1, PROTEIN KINASE C, FOCAL ADHESION KINASE BY HUMAN UMBILICAL VEIN ENDOTHELIAL CELL POST-TRANSFECTED VEGF165

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Objectives To observe the effects of Qi supplement and Blood Activation prescription (QSBA) and its disassembled prescriptions medicated serum on the expression of vascular endothelial growth

factor (VEGF), and its receptor Flk-1, Protein Kinase C (PKC), focal adhesion kinase (FAK) by Human umbilical vein endothelial cell post-transfected pcDNA3.1-$VEGF_{165}$.

Methods Constructing pcDNA3.1—$VEGF_{165}$ restructuring plasmid, then it was transient transfected in Human Umbilical Vein Endothelial Cells (HUVEC). Prepare Qi supplement and Blood Activation prescription and its disassembled prescriptions medicated animal serum, physiological saline normal serum. Seed the post-transfected HUVEC with 5% serum. The expression of VEGF, Flk-1, PKC and FAK were detected by using Western Blot.

Results

1. The expression of VEGF in the QSBA group is higher than the Saline group. There is a significant difference between the two groups ($p<0.01$). The expression of VEGF in the Blood Activation (BA) group and the Qi supplement (QS) group are lower than the QSBA group. Both groups have statistically significant difference when compare with the whole group ($p<0.01$).
2. Either the expression of Flk-1 in the QSBA group or in the BA group is higher than the Saline group. Both groups have statistically significant difference when compare with the Saline group ($p<0.05$). The expressions of Flk-1 in disassembled prescriptions groups are lower than the QSBA group. There is a significant difference when compared with the whole group ($p<0.05$).
3. The expression of PKC in the QSBA group and its disassembled prescriptions group are higher than the Saline group. All of them have significant with it ($p < 0.01$). The expression of PKC in the disassembled prescriptions groups is lower than the whole group. Both groups have significant with the whole group ($p < 0.01$).
4. The expression of FAK in the QSBA group and QS group are higher than the saline group. Only the QSBA group has a significant difference compare with the saline group ($p<0.05$). The expressions of FAK in disassembled prescriptions groups are lower than the QSBA group. Both groups have statistically significant difference when compare with the whole group ($p<0.05$).

Conclusions QSBA can not only promote the expression of VEGF, but also increase the expression of Flk-1, PKC and FAK. Both BA and QS play roles in this aspect. The role of all parts is better than demolition part. The therapeutic angiogenesis mechanisms of QSBA maybe relate to increase the expression of Flk-1, PKC and FAK, accordingly promote endothelial cell migration, and improve vascular permeability. The specific mechanism remains to be further studied.