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COMPARATIVE STUDY ON PHARMACOKINETICS OF AMERICAN GINSENG IN THE MAIN COMPONENT OF HUAQIZEREN

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Objectives Comparative study on HuaQiZeRen of ginsenoside Rb1 and American ginseng of ginsenoside Rb1 in rat plasma pharmacokinetics.

Materials and methods The establishment of ultra high liquid chromatography tandem mass spectrometry to study the sensitivity and reliability of HuaQiZeren single herbs ginseng in rats in vivo pharmacokinetic characteristics, improve drugability evaluation HuaQiZeren. SD rats were randomly divided into HuaQiZeren group and American ginseng group were orally given HuaQiZeren and Panax quinquefolium decoction, to give medicine before and after a series of time points of blood plasma samples were collected for determination of Pharmacokinetic parameters were calculated by DAS software, the main medicine ginseng group and active ingredient group ZerenHuaQiZeren ginsenoside Rb1 pharmacokinetic parameters were compared, observe the main pharmacokinetic parameters have no significant difference.

Results Between 0.05~10 and g/mL concentrations, ginsenoside Rb1 had a good linear relationship in plasma, with a lower limit of 0.05 g/mL, and the difference between day and day was less than 10%. Citi group and Zeren ginseng group active component ginsenoside Rb1 pharmacokinetic parameters were the main drugs in rats: Cmax (g/L) 779.6 + 70.92 and 608.6 + 85.67; Tmax (H) 2 and 0.75; the elimination half-life t_{1/2} (H) 15.58 + 7.574 and 9.947 + 4.099; AUC_{0-t} area under the concentration time curve (g/L*h) 9937 + 1503 and 3662 + 301.5; the average residence time of MRT_{0-t} (H) 0.7406 and 14.67. 7.825 + 0.4090; plasma clearance rate of CL (L/h/kg) 0.1968 + 0.04122 and 0.4992 + 0.07002. Comparison of pharmacokinetic parameters and the ginseng group active ingredients of ginsenoside Rb1, Citibank Group HuaQiZeren active ingredients of ginsenoside Rb1 Cmax P<0.01, AUC_{0-t} P<0.01, T_{1/2} P<0.05 and MRT_{0-t} were significantly increased in P<0.01, CL and P<0.01 decreased significantly.

Conclusion In vivo the main active ingredients of Citigroup Zeren ginsenoside Rb1 absorption and metabolism is relatively slow, can maintain a high plasma concentration. The compatibility of active ingredients Citibank Zeren of ginsenoside Rb1 in Panax ginseng and absorption.

Key words: Huaqizeren; ginsenoside Rb1; HPLC-MS/MS; Comparative pharmacokinetics

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PROGRESSIN PHARMACOLOGICAL ACTIVITIES OF DIOSMIN

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Abstract: Diosmin is flavonoids compound. It can increase the tension of the vein, improve microcirculation, promote lymphatic reflux, and alleviate edema. In recent years, some new pharmacological effects of diosmin have been studied. In this paper, the pharmacological effect from diosmin of recent years were bebriefly reviewed, which provides scientific basis for the development and utilization of diosmin.

Key words: Diosmin; pharmacological

Diosmin, Molecular formula: C₂₈H₃₂O₁₅ ; Molecular weight: 608, which can also be found in a variety of natural plants, such as Galium verum, Mint, Lobelia, Milia, Toddalia asiatica, Bergamo, we reviewed the latest pharmacological researches and clinical application prospects in recent years.

1 Antidiabetic effect Srinivasan S[1] found that the effect of 2- on the oxidative stress induced by streptozotocin (STZ) has good therapeutic effect on diabetic rats. 2- induced diabetic rat model was established by STZ. The plasma glucose level of model group significantly increased and the plasma insulin level was significantly lower ; Jain D [2] found that diosmin can improve the nerve lesion in early diabetic rats, type 2- diabetic rats by dafion 5~100 mg/kg after four weeks treatment. It can reduce the body weight, elevate blood glucose and lipid levels were restored;

2 Hypotensive effect Silambarasan T[3] established hypertension model rats by subcutaneous injection of deoxycorticosterone acetate and oral Sodium Chloride Solution, resulting in a rat model of cardiac systolic and diastolic blood pressure, serum sodium and chlorine, plasma and tissues (liver, kidney, heart and aorta) in lipid peroxidation increased significantly.

3 Hypotensive effect The protective effect of geraniol on myocardial injury is closely related to scavenging free radicals and reducing lipid peroxidation.[4]

4 Ischemia reperfusion injury Dung TD[5] research showed that diosmin can resist against cerebral ischemia reperfusion injury in mice induced by apoptosis, activation of JAK2/STAT3 signaling pathway protects the brain ischemia reperfusion injury, and diosmin in high dose group can significantly relieve nerve injury, brain edema, reduce the infarction area, pJAK2, pSTAT3, Bcl-2 expression and downregulation of Bax.

5 Anti apoptosis effect Many studies showed that increased apoptosis and neurodegenerative diseases, inflammatory factors have a certain relationship, the majority of LPS induced cell apoptosis play a role through TNF- products.

6 Anti Lung injury

Imam F's studies show that Diosmin can inhibit proinflammatory cytokines and activation of NF- protective effects on lung injury induced by lipopolysaccharide receptor, T cell. The protective mechanism mainly involves reducing the number of neutrophils, monocytes, lymphocytes, white blood cells (TLC) and platelet count;

7 Other effects Yoo HH[7] found that diosmin had an inhibitory effect on P-gp in Caco-2 cells, which could increase the absorption of P-gp substrates. Attention should be paid to the combination of drugs in clinical treatment in order to avoid adverse reactions.

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APPLICATIONS OF OMICS TECHNOLOGY ON TCM SYMPTOMS EXPLORATION

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Abstract: Traditional Chinese medicines (TCMs) have a long history for the treatment or preventing disease. The symptoms classification may guide patient classification of predose phenotype and prescribe traditional Chinese medicines formula according to the phenotype. The accurate classification of symptoms is a prerequisite for the treatment of traditional Chinese medicine. Due to the diversity pathological basis of TCM syndrome and the uniqueness of the diagnostic methods, it is difficult to use modern medicine to explain the scientificity of TCM syndrome and to diagnose it more accurately. Omics technology (such as Proteomics, Metabolomics, Transcriptomics, Genomics, etc.) has brought the dawn to clarify the mechanism and accurate diagnosis of TCM syndrome. This paper reviews the widely used of past four kinds of omics technology in the research of TCM syndrome and highlights the key role of modern tools for precise diagnosis of TCM syndrome.