2.Memory enhancement Cui Ying et al [4]. used glutamic acid monosodium(MSG)damage model in the arcuate nucleus of the hypothalamus as kidney yin deficiency of learning and memory impairment model. Through the step-down test and Mirrio water maze method and free method to observe. The mechanism was related to the inhibition of plasma CORT content and the expression of GRmRNA in hippocampus. We believe that the Rehmannia glutinosa's improvement in learning memory mechanism may be related to the increase of c-fos and NGF gene expression in the hippocampus of the relevant [6].

3.Promotion of hematopoiesis Rehmannia polysaccharide has a strong effect on protecting blood deficiency model mice white blood cell count (WBC), red blood cell count(RBC), hemoglobin(HB), platelet(PLT), which is better than that of non-Rehmannia polysaccharide part and Rehmannia decoction. In different blood deficiency model mice peripheral blood, bone marrow nucleated cells were decreased antagonism and of murine hematopoietic stem cells can promote the effect of value-added and differentiation, which shows that the effect of enriching blood.

In summary, Radix rehmanniae can enhance immunity, improve memory, promote hematopoiesis, antioxidation, and imrove anti mutation inhibition of tumor suppressor and central. With the further study of the scholars of pharmacology, the further development of pharmaceutics and drug metabolism and pharmacokinetics, Radix Rehmanniae Preparata in clinic will get more extensive application, and it will play a more important significance to human health.

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EFFECT OF LATERALIS RADIX PRAEPARATA COADMINISTRATION WITH LATERALIS RADIX PRAEPARATA ON CYP1A2 AND CYP3A4 IN RAT

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OBJECTIVE: To determine the attenuated mechanism of the combination of Acontti Lateralis Radix Praeparata (ALRP) and Dry Radix Rehmannia (DRR). We examined potential mechanisms, specifically alterations in enzyme activity of CYP450 in rats.

METHOD: Rats were randomly divided into four groups with six animals in each group and treated as the follows: control group, ALRP group, DRR group and DRR combined with ALRP group. All groups were administered via gavage once a day for seven days, the control group received saline water. Rats were administered continuously for seven days, fasting for 12h, on the eighth day were killed by cervical dislocation, then flush the liver with cold 0.9% NaCl solution until the color turn to yellow. Add 0.25mol·L-1 sucrose solution in liver tissue at the ratio of tissue: solution= 1: 4 to make homogenate. Calcium precipitation method was used to make liver microsomal under the condition of low temperature, high-speed centrifuge for 15 min with 20000 r·min-1. Then the liver microsomal was incubated with two probe drugs (caffeine and midazolam) in vitro. The RT- HPLC method was established to determine the two probe drugs in liver microsomes, to evaluate the effect of the different group on the activity of CYP1A2 and CYP3A4. The analytes were determinated at room temperature on analytical column and the mobile phrase was composed of 0.05mol·L-1 ammonium dihydrogen phosphate, adjusted to pH 3.4 with phosphoric acid (A) and methanol (B) at the ratio of A:B of 49:51(v/v) and a flow rate of 0.8 mL·min-1. The detector was operated at 254 nm and the column temperature was maintained at 35°C.

RESULT: The activity of CYP1A2 in ALRP group was higher than the control group's, but the statistical analysis of the data was P>0.05. It means just a slight induction effect on CYP1A2 activity, no significant difference. The activity of CYP1A2 in DRR combined with ALRP group was higher (P<0.05), and there was significant difference.

ALRP group had no effect on the activity of CYP3A4 (P>0.05), while DRR group and DRR combined with ALRP group increased the activity of CYP3A4 compared with the control group (P<0.05), and there was significant difference.

CONCLUSION: The enzyme activity showed significant induction effect on CYP3A4 enzyme in containing DRR groups, indicating DRR induced CYP3A4 activity, and accelerated the metabolism of the toxic component of ALRP, reduced the accumulation of toxic components in vivo. DRR itself had no effect on CYP1A2 activity, but can obviously induce the activity of CYP1A2 when it combined with ALRP. Maybe there were some changes in chemical composition which can induce the activity of CYP1A2 generation in the boiling process or in vivo. ALRP combined with DRR induced CYP450 activity expression may be one of the mechanisms of toxicity of ALRP. It verified the scientific nature of traditional Chinese medicine compatibility theory.

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THE CHEMICAL COMPOSITION OF LICORICE AND ACTIVITY RESEARCH

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Abstract： Licorice is a kind of traditional Chinese medicine among the common medicinal plants.The air sweet flat,with Qingrejiedu,Buzhongyiqi,relieving pain,arresting cough, harmonize the drug effect. In recent years,with the popularization and application of traditional Chinese medicine, Many in-depth studies were conducted on chemical composition and pharmacological effects of licorice.This paper summarizes the chemical constituents and pharmacological effects of licorice,to promote the medicinal value of licorice in traditional Chinese medicine clinical application further more.

Keywords: licorice chemical composition activity research

Licorice, licorice, is leguminous plants ,swelling fruit licorice and light fruit licorice root (roots) after dry collectively, more growth in the loess hills, arid and semiarid desert grassland and the edge of the desert.Licorice main efficacy: Buzhongyiqi,Qingrejiedu, expectorant, cough, pain and break medicinal,its medicinal composition mainly includes: licorice flavonoids, glycyrrhizic acid, licorice polysaccharide, glycyrrhetinic acid and so on. In this paper, the pharmacological action of the main medicinal ingredients of liquorice is summarized.

1 Chemical Composition

1.1 Part of flavonoids ingredients have C6 C3 - C6 basic mother nucleus of natural products,widely exist in natureis a kind of important natural organic compounds.Licorice flavonoids from licorice extract in a kind of biological active ingredients.Many scholars on the chemical composition of a lot of research work.According to the existing data: at home and abroad has identified more than 300 was isolated from licorice flavonoids.

1.2 The terpene compound liquorice This kind of compounds in the main is a sweet saponin glycyrrhizin.Glycyrrhizin,also known as glycyrrhizic acid,is the main component of licorice by glycyrrhetinic acid and two molecules of glucuronic acid.Glycyrrhizin could be in the form of potassium or calcium salt exists in licorice.

1.3 Other compounds of licorice Toshio Japan 1989 was isolated from the aerial parts of heilongjiang of glycyrrhiza uralensis coumarin of 1,then separated into five other phenolic derivatives.Someone from licorice bur also receive a beta sitosterol,a compound of glutamic acid ethyl phthalein and palm acid.

2 Effect Research

2.1 The antiviral effect: HIV: Japanese scholars from licorice tannins in the active ingredient research activity Points (including flavonoids ingredients) to strengthen the human immunodeficiency virus (HIV) for ATL - IK (The source of adult T cell leukemia cell line) in patients with antagonism effect,two new licoriceEr ketone when low concentration showed proliferation inhibition of HIV.

2.2 Anti-inflammatory and immune function Glycyrrhetinic acid edema of rat granuloma induced by cotton ball,-formaldehyde,tuberculin reaction,subcutaneous granulomatous inflammation have certain inhibition.Japanese scholar small jian hour and isolated from licorice to have anti-inflammatory activity of flavonoids ingredients licorice glycosides.

2.3 Cough and asthma Licorice flavonoids,glycyrrhetinic acid and its derivatives have antitussive effect,the antitussive effect was produced by the central,glycyrrhetinic acid choline antitussive effect is the strongest.The choline salt subcutaneously or hydrogen choline succinic acid double salt oral,cough effect similar to codeine.