to the surface can occur to desorption. The active components fall and release on the surface. Secondly, some of the components may also be wrapped in the colloidal particles. The components on the surface are first dissolved in the beginning of the release. The internal active components are further released through the fine channel of the nanoparticles in the structure. Thirdly, the colloidal polymer is likely to spread as a whole and be ingested directly. After taking the drug, the drug-loaded colloidal particles are first adsorbed on the cell surface in some way, and then are taken into the cell by adsorption endocytosis and transported to the blood by the same mechanism. Finally, the high concentration of polymer solution after swelling will form a network of gel. After gel is contacted with medium, hydrophilic fragments are dissolved in the gel to form a large number of water-based channels. The active components are dissolved and spread out from the skeleton structure. The dissolution rate of the active components in the structure may be less than the diffusion rate of the active components.

By the drug release behavior in BHT can be seen that release behavior of the colloidal solution is multi-channel and has a certain sustained-release effect, which fully embodies the characteristics of safety, effective, stable and controllable of traditional Chinese medicine preparation.

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EFFECTS OF TOTAL SAPONINS FROM RHIZOMA DIOSCOREANIPPONICA ON BIOMARKERS IN URINE OF GOUTYARTHRITIS RATS

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Abstract The primary compositions of Dioscorea nipponica Makino are steroidal saponins, which have some inhibitive effects on humoral and cellular immunity. Gout is immune metabolic disease which is caused by deposition of monosodium-urate in the articular cartilage due to high concentration of uric acid as a result of purine metabolic disorder. For the past few years, there are many experimental researches on pharmacological effects of total saponins from Dioscorea nipponica Makino demonstrating treatment of gouty arthritis and it was found that they regulated the synthesis, excretion of uric acid and treat gouty arthritis by regulating the relating signal pathways. In this study, We compare those biomarkers changesin the urine between before and after administration of the total saponins.

Key words:total saponins from Dioscorea nipponica Makino, gouty arthritis; guanosine, creatinine, uric acid, HPLC

The metabolism of the human body involves a large number of small molecular compounds, including carbohydrates, lipids, nucleotides and so on. These compounds, as biomarkers in the body, are characteristic materials in anatomy, physiology, biochemistry, or imaging, which can ensure the diagnosis and prognosis of disease, and can evaluate the therapeutic effect. In this study, We compare those biomarkers changes in the urine between before and after administration of the total saponins.To determine whether it will control the body by biomarker synthesis and metabolism of material to achieve the purpose of anti gout arthritis.

Objective To explore the effect of total saponin of Rhizoma Dioscorea nipponica (RDN) on contents of guanosine, uric acid and creatinine in urine of gouty arthritisrats by high performance liquid chromatography(HPLC) with UV detection and UV spectrophotometric.

Materials and methods 60 Wistar rats were randomly divided into six groups.They were normal group, model group, total saponins groups of high(160mg/kg) ,middle (80mg/kg) and low(40mg/kg) doses and colchicine group. Total saponins of RDN were given for 7 successive days. An hour after total saponins of RDN were given at the third day,0.2ml 25mg/ml MSU suspension was injected into articular cavity through anadesma of kneecap in the knee-joint to induce model of gouty arthritis. HE and eosin dyeing were used to observe the histopathological change. A DiamonsilC18 column(5um ,250×4.6mm) was used for the analysis at 25℃, The separation was carried out with the mobile phase consisting of methanol-ammonium acetate(0.03mol/L) at a flow rate of 1mL/min.The eluates were monitored by the programmed wavelength at254nm for guanosine; The contents ofuric acid and creatinine in urine were detected by UV spectrophotometric.

Resultsand Conclusion In the model group, the levels of guanosine and creatinine were significantly decreased and the content of uric acid was significantly increased. Compared with the model group, guanosine, uric acid and creati-

nine contents increased significantly in total saponins groups.

Guanosine, creatinine and uric acid were important biological markers in the occurrence and development of gouty arthritis. Total saponin of RDN have potential effects on the treatment of gouty arthritis by regulating the content change of these biomarkers.

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RESEARCH PROGRESS ON IMMUNE EFFECTS OF CYCLOARTANE TRITERPENOIDS FROM ASTRAGALI RADIX

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Abstract With retrieval literature review data on modern pharmacological study of Astragalus saponins in recent 10 years, the article summarized the pharmacological effects and mechanism on immune activity of cycloartane triterpenoids from Astragali Radix, in order to provide references for the further research on the mechanism of immune activity of Astragalus cycloartane triterpenoids.

Key words Immune effect; Cycloartane triterpenoids; Astragali Radix; Research progress

Recent studies have shown that astragalus saponins also have definite immune activity. Especially the cycloartane triterpenoids, such as astragaloside Ⅰ, astragaloside Ⅱ, astragaloside Ⅲ, and astragaloside Ⅳ, but the mechanism is still unclear.

Large number of studies showed that astragaloside had clear immune enhancement effect. cycloartane triterpenoids can enhance the immune function of mouse peritoneal macrophages. Ding found astragaloside Ⅳ can adjust the cell proliferation and cytokine secretion with a two-way adjustment function on the immune function. Research also found astragaloside II enhanced the activation of T cells by regulating the activity of PTPase CD45. Liu found the high levels accumulation of astragaloside Ⅲ in the thymus and spleen. The distribution suggested that it is the main target of the immune response.

To sum up, the pharmacological study of astragalus saponins mainly concentrated in total astragaloside and astragaloside Ⅳ, little in astragalus saponin I, II and III, while the research on other cycloartane triterpenoids severally is blank, it needs to further research. The author also found that dose-effect relationship of Astragalus saponins on the immune regulation activity is not clear. Astragalus saponins had bidirectional regulation effect on the immune response, so it is worth further study in order to know well the dose-effect relationship and ensure the clinical medicine effectiveness and safety of astragalus saponins on treatment of immune diseases.

THE RESEARCH OF NANOMETER TRADITIONAL CHINESE MEDICINE ON HEPATOCELLULAR CARCINOMA

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Abstract: Hepatocellular carcinoma (HCC) with high morbidity and mortality is one of the most common diseases of digestive diseases and rising. At present, surgery, radiotherapy and chemotherapy is used for the treatment of HCC in clinic, but drug is also essential treatment tools. However, poor selectivity and absorption rate of the drugs and multidrug resistance lead to a therapeutic effect for HCC patients not ideal. Traditional Chinese medicine (TCM) has unique advantages in the treatment of HCC. And nanotechnology can make drugs to transport directly to the target organ and militate. Nanometer TCM (NTCM) combines the advantages of TCM and nanotechnology, which solve the above problem effectively. In this paper, we introduce the effects of NTCM on HCC and research progress.

Key words: hepatocellular carcinoma, nanometer traditional Chinese medicine, target point

Introduction Hepatocellular carcinoma (HCC) is one of the most common diseases in clinic with the high death rate. At present, the morbidity of HCC is rising in China, and surgical treatment and adjuvant therapy have their own limitations[1]. So it is necessary to find a rapid and available method to cure HCC. Compared with the traditional tumor adjuvant therapy, NTCM is more effective and selective to kill a large number of liver cancer cells with smaller damage of body, which is new trend of development and research in the field