3. Clustering results discussion  

C1 Atractylodes, Astragalus, Malt, Hawthorn, Divine Comedy: Atractylodes and astragalus, atractylodes is the first important medicine for invigorating spleen qi, astragalus is the most important to supplement the qi, the two belong to tonify deficiency, often share big repair viscera vigour of weakness. Song think long illness of people more than the day after tomorrow is deficient, combined with modern irregular diet and rest life could hurt taste and poor transport function, and focal three fairy song division is the most commonly used xiaoshi drugs, more than ninety percent of the cases can be found in its use.  

C2 Dodder, savanna, mulberry cuttlebone, raspberry, Gorgon, Rosa laevigata, Ligustrum lucidum: This kind of medicinal is tonifying combined with astringent, good at entering the liver and kidney. For the CGN of liver and kidney deficiency type, with liver and kidney complement, Gushen astringent fine effect.  

C3 Thistle, thistle, raw yellow, Rehmannia glutinosa, oriental arborvitaes, elm, Ouijie, palm charcoal, baicalin, ebony: Song in the prescription in the application of such drugs more choice fried charcoal processing. On the one hand, charcoal its nature, to ease the drug and the toxicity of the same time to retain its inherent odor, on the other hand carbon black multi-color, so the charcoal drugs can enhance the effect of cooling blood to stop bleeding.  

C4 Apocynum, Centella asiatica, Papilion, Qinpi, rhubarb, soil Fuling, Rhizoma Imperatae, Scutellaria barbata, Hedyotis diffusa, Puhuang, Nepeta: This kind of fang is given priority to the heat of liver and spleen. Statistics, behavior more than 50% in patients with CGN has damp and hot, song CGN attaches great importance to the damp heat evil treatment, such party is mainly used in the spleen kidney both deficiency and see evil inside one of the hot and humid.  

Reference:  


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EVALUATION OF ACTIVITY OF THE LIPID PEROXIDATION PROCESS AT ATHLETE COMPETITORS OF AMUR STATE MEDICAL ACADEMY  

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Abstract  

The development of sports of higher achievements and mass sports movement is rightfully considered one of the most important priorities of state policy in the Russian Federation (August 12, 2017, Official Network Resources of the President of Russia). However, it should be noted that intense physical stresses, which are a stressor for the body and cause activation of lipid peroxidation (LPO) processes, can lead to disruption of the normal functioning of the athlete’s body.  

Key words: athlete, lipid peroxidation  

The purpose of the study was to evaluate the activity of LPO in athletes engaged in the Amur State Medical Academy as an indicator of effective / ineffective work of the body’s antioxidant defense system (hereinafter AOC - antioxidant system).  

Materials and methods  

To achieve this goal, we sampled venous blood and evaluated the laboratory parameters of LPO (malonic dialdehyde, lipid hydroperoxide, diene conjugates) in 7 athletes using the elements of descriptive statistics (mean, median, standard deviation).  

Results  

The analysis of blood plasma for lipid peroxidation products showed the following values (Table 1 - The content of lipid peroxidation products in the blood plasma).

<table>
<thead>
<tr>
<th>No</th>
<th>Malonoidaldehyde nmol / ml</th>
<th>Lipid Hydroperoxide nmol / ml</th>
<th>Diene conjugates nmol / ml</th>
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</thead>
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<tr>
<td>1</td>
<td>4,9</td>
<td>32,2</td>
<td>39</td>
</tr>
<tr>
<td>2</td>
<td>3,8</td>
<td>30,6</td>
<td>41</td>
</tr>
<tr>
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<td>5,4</td>
<td>38,2</td>
<td>42,5</td>
</tr>
<tr>
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</tr>
<tr>
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<tr>
<td>7</td>
<td>6,5</td>
<td>28,9</td>
<td>42,5</td>
</tr>
</tbody>
</table>

1) The average value of the malonic dialdehyde content of blood plasma was 5.07 nmol / ml, the median was 4.9 nmol / ml, the standard deviation was 0.79 nmol / ml. Confidence interval: (3.97, 6.18) nmol / ml. With a proba-
STUDIES ON THE METABOLISM OF THE MAIN ACTIVE COMPONENTS OF HUAQIZEREN IN RAT URINE AND FECES

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Objectives: The contents of three main active ingredients (ginsenoside Rb1, alismate A-24-acetate and 9-HODE) in the urine and fecal samples of Huaqizeren standard mixed rats were determined by HPLC-MS/MS The metabolic pathways were identified , and the biotransformation of Huaqizeren in vivo was explored.

Materials and methods: Rats were fed with urine and fecal samples after administration of the three standard ingredients (ginsenoside Rb10.16%, Alisma alcohol A-24-acetate 0.0045% and 9-HODE0.013%). Before and after administration for 12 h. The search and confirmation of metabolites were analyzed by UPLC-Q-TOF / MS.

Results: ①The average concentration of ginsenoside Rb1 in urine and feces was 213.1±85.32 ng/ml, 2.578±1.117 ng/g, after administration of 0~12h. The average concentration of A-24-acetate in urine and feces was 12.54±4.28 ng/ml, 0.1263±0.0481 ng/g. ②In the urine, ginsenoside Rb1 mainly to the prototype drug-based, in addition to ginsenoside Rb1 related metabolites 13 species, the structure identified asGinsenoside Rd, Ginsenoside Rg3, Ginsenoside Rh2, Ginsenoside F2, Ginsenoside Cpd K, Gypenoside XVII, Gypenoside LXXV, Gypenoside Ppd, Monoxygenated Rb1, Di-oxygenated Rb1, Dehydrogenated Rb1, Combined Rb1(1), Combined Rb1(2). Alcohol A-24-Acetate Metabolites Alisol A, 9-HODE Metabolites 9-oxoODE. In the feces, four kinds of ginsenoside Rb1 related metabolites were found, identified as Ginsenoside Rg2, Ginsenoside Cpd K, Ginsenoside Ppd. Alcohol A-24-acetate metabolite Alisol A, no 9-HODE metabolite.

Conclusion: This study established a sensitive and reliable HPLC-MS/MS method to determine the concentration of ginsenoside Rb1, Alisma A-24-acetate and 9-HODE in urine and feces. In the urine, feces found in the three active ingredients related metabolites, suggesting that urine, feces may be the three active ingredients of Citrus grandis important metabolic pathway, in order to determine the basis of Huaqizeren drug substance and improve the pharmacokinetic study Lay the foundation.

Key words: Huaqizeren; ginsenoside Rb1; Alisma alcohol A-24-acetate; 9-HODE; HPLC-MS/MS

References: