Analysis of the Law of Chinese Pharmacopoeia Containing Rehmanniae Radix Praeparata

Ting GAO and Ming-san MIAO*

Henan University of Chinese Medicine, Zhengzhou, 450046

*Corresponding author

Keywords: Rehmanniae radix praeparata, Chinese Pharmacopoeia, Chinese patent medicine, Medication rule, Association rule.

Abstract. Purpose: Analysis of the law of Chinese medicine containing Rehmanniae radix praeparata to provide reference for guiding the development of clinical drugs and new prescriptions. Method: The 2015 edition of the Chinese Pharmacopoeia contains the Chinese patent medicine containing Rehmanniae radix praeparata as the data source, and uses Excel 2013 and SPSS Modeler 14.1 statistical software as tools to analyze the statistical processing and association rules of the Chinese medicines included in the standard. Result: Among the total prescriptions included in the standard, the top five traditional Chinese medicines with the highest cumulative frequency are Rehmanniae radix praeparata (132 times, 100%), Angelica sinensis radix (78 times, 59.1%), Paeonia Radix alba (58 times, 43.9%), Chuanxiong rhizoma (56 times, 42.4%), Glycyrrhiza radix et rhizoma (49 times, 37.1%). The dosage form containing it is widely distributed. By analyzing the association rules of traditional Chinese medicine containing Rehmanniae radix praeparata, 16 kinds of commonly used drugs are obtained. There are 10 kinds of traditional Chinese medicine clinical diseases in the main diseases. In the analysis of association rules, 20 kinds of medicines with the highest correlation intensity for treating renal diseases are found, and 17 kinds of medicines with the highest correlation intensity for treating menstruation, belt and miscellaneous diseases are 17 kinds. Conclusion: Through the analysis of traditional Chinese medicine containing Rehmanniae radix praeparata, the drug rule and compatibility characteristics of Rehmanniae radix praeparata in different diseases were reflected. Rehmanniae radix praeparata, a processed product of Rehmanniae radix praeparata. It contains sterols, sugars, retinoins, amino acids, dignystatin (ABD, etc.) and various chemical trace elements \[1\]. Modern pharmacological studies have shown that Rehmanniae radix praeparata has anti-anxiety, anti-tumor, anti-oxidation, promote hematopoiesis, improve memory and other pharmacological effects \[2-4\]. Clinically, Liuwei Dihuang Pills can reduce the recovery period of cerebral infarction \[5\], chronic nephritis, type 2 diabetes, chronic aplastic anemia, and delay aging. Qiju Dihuang Pill is mostly used for the treatment of hypertension, and has better treatment for hyperlipemia, senile liver and kidney yin deficiency type 2 diabetes, senile cataract, chronic hepatitis B, recurrent aphthous ulcer and cervical spondylosis. Rehmannia glutinosa is used for beauty and health in the area of beauty and black hair.

Data and Methods

The "Chinese Pharmacopoeia" in the 2015 edition of the Chinese Pharmacopoeia \[6\] is summarized and summarized, and the prescription contains "Rehmanniae radix praeparata" as the standard. In the 2015 edition of the Chinese Pharmacopoeia, 132 Chinese patent medicines containing Rehmanniae radix praeparata were inquired. All the Chinese medicines in the standard-compliant prescriptions were input into Excel 2013 one by one to establish a database, and the Chinese medicines in the database are sorted and sorted, and SPSS Modeler 14.1 is used for statistical processing.
Results

Relevant Chinese Medicine Use Frequency

All the drugs in the selected prescriptions are summarized to obtain a total of 278 traditional Chinese medicines, and the cumulative frequency of occurrence is 1902 times. Among them, there are 46 kinds of drugs with frequency ≥10, and there are 1232 times in total. The top five traditional Chinese medicines with the highest frequency of occurrence in all prescriptions are Rehmanniae radix praeparata (132 times, 100%), Angelica sinensis radix (78 times, 59.1%), Paeonia Radix alba (58 times, 43.9%), Chuanxiong rhizoma (56 times, 42.4%), Glycyrrhiza radix et rhizoma (49 times, 37.1%).

Distribution of Medicinal Forms Containing Rehmanniae Radix Praeparata

Table 1. Distribution of medicinal forms containing Rehmanniae radix praeparata.

<table>
<thead>
<tr>
<th>Formulation</th>
<th>pill</th>
<th>sheet</th>
<th>capsule</th>
<th>Granule</th>
<th>mixture</th>
<th>Scrub</th>
<th>syrup</th>
<th>Wine</th>
<th>ointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>56</td>
<td>26</td>
<td>22</td>
<td>13</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>percentage(%)</td>
<td>42.4</td>
<td>19.7</td>
<td>16.7</td>
<td>9.8</td>
<td>7.6</td>
<td>1.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Containing Rehmanniae Radix Praeparata Chinese Medicine Core Drug Pair

Using SPSS Modeler 14.1 statistical software to analyze association rules, setting the support degree to 25%, the confidence is 100%, the maximum before the number of items is 10, and the potential drug combinations in the commonly used prescriptions were excavated under conditions of ≥1, and a total of 16 core drug pairs are combined.

Analysis of the Law of Drug Use in Common Diseases of Rehmanniae Radix Praeparata

There are 55 kinds of Chinese patent medicines in the traditional Chinese medicine containing Rehmanniae radix praeparata. The main diseases are kidney diseases. Using SPSS Modeler 14.1 statistical software to analyze association rules, setting the support degree to 33%, the confidence is 100%, the maximum before the number of items is 10, and the potential drug combinations in the commonly used prescriptions were excavated under conditions of ≥1, and a total of 20 core drug pairs are combined.

There are 33 kinds of Chinese patent medicines in the traditional Chinese medicine containing Rehmanniae radix praeparata. The main diseases are women's menstruation, belt and miscellaneous diseases. Using SPSS Modeler 14.1 statistical software to analyze association rules, setting the support degree to 80%, the confidence is 100%, the maximum before The number of items is 10, and the potential drug combinations in the commonly used prescriptions were excavated under conditions of ≥1, and a total of 17 core drug pairs are obtained.

Discussion

Through the association rule analysis of all proprietary Chinese medicines containing Rehmanniae radix praeparata, 16 core combinations are obtained, such as Rehmanniae radix praeparata -Angelica sinensis radix (Tonic-Tonic), Rehmanniae radix praeparata-Poria (Tonic-Water hygroscopic drug). It can be seen that in the clinical application of Chinese medicine. It is more compatible with Angelica sinensis radix, Poria and Paeonia radix alba. It is found that 20 kinds of medicines with the highest correlation intensity for treating renal diseases are combined, such as Rehmanniae radix praeparata-Poria (tonic-Water hygroscopic drug), Rehmanniae radix praeparata-Dioscoreae rhizoma (tonic-tonic), and so on. It can be seen that it is often used in combination with Dioscoreae rhizoma, Poria and Angelica sinensis radix in the treatment of renal diseases. Kidney deficiency is the main pathological mechanism of male infertility, and the rise and fall of kidney gas is the core factor leading to fertility [7]. Patients can exercise to enhance renal function on the basis of traditional Chinese medicine treatment [8]. It is found that 17 kinds of
medicines with the highest correlation intensity of menstruation, belt and miscellaneous diseases were treated, such as Rehmanniae radix praeparata-Chuanxiong rhizoma(tonic-Blood stasis), Rehmanniae radix praeparata-Angelica sinensis radix(tonic-tonic). It can be seen that in the treatment of women's menstruation, belt, and miscellaneous diseases, Rehmanniae radix praeparata is often used in combination with Angelica sinensis radix, Chuanxiong rhizoma and Paeonia Radix alba. Chinese medicine theory believes that common women's menstruation, belts, and miscellaneous diseases, such as menstrual irregularities are not only due to the chilling and weak constitution, but also affected by the “rushing pulse”. Treatment should be based on the spleen, liver, kidney and Yiqihuo-xue. Therefore, clinical use should pay attention to the compatibility of Rehmanniae radix praeparata and blood stasis drug, Chuanxiong rhizoma, and tonic, Angelica sinensis radix.

In this paper, through the inductive statistics of traditional Chinese medicine containing Rehmanniae radix praeparata, the preliminary analysis and discussion of its medication rules, reflecting it is used in different diseases and the characteristics of compatibility. It provides a basis for the standardization and scientific application of clinical application of Rehmanniae radix praeparata, and adapts to clinical needs.

References


