

A COMPARATIVE STUDY ON THE PHARMACOKINETICS OF ALISMA ORIENTALIS AND ITS COMPATIBILITY

Jiixin Li¹, SunYu¹, Kaixin Liu¹, Yuchi Zhang¹, Xiaonan Liu¹, Pengyang Yu¹, Qijing Huang¹, Pengling Ge *

¹Department of Pharmacology, School of Basic Medical Sciences, Heilongjiang University of Chinese Medicine, Harbin 150040, China; *Corresponding authors: Pengling Ge, Department of Pharmacology, School of Basic Medical Sciences, Heilongjiang University of Chinese Medicine, 24 Heping Road, Harbin 150040, China; E-mail: penglingge@126.com

Abstract Rhizoma Alismatis is the composition of the treatment of type II diabetes experience of one of the three flavors of Citrus grandis, modern pharmacological indicate that it have function include diuretic, lowering blood pressure, lowering blood sugar, anti-atherosclerosis, immune regulation and so on. The results of the study on the pharmacokinetic process of the active ingredient in rat rats after administration of Citrobenezene and Alisma orientalis respectively showed that Alisma Ophiopogon japonicus could increase its active ingredient, A-24-acetate absorbs in the body and reduces its plasma clearance.

Key words Rhizoma Alismatis ; Alcohol A-24-Acetate ; Pharmacokinetics ; HPLC-MS/MS

Objective To study the pharmacokinetic differences of Alisma orientalis and Alisma orientalis in rats.

Materials and methods Twenty - four SD rats were randomly divided into two groups, namely, Huaqizeren group and Alisma group. According to 1mL / 100g body weight were given to the flower flag Ze, Alisma water decoction, take blood by the orbital venous plexus about 0.5mL before administration and after administration 0, 0.25, 0.5, 0.75, 1, 2, 3, 4, 6, 8, 12, 24, 48 h, determination of Alcohol A-24-Acetate by Liquid Chromatography / Quadruple-Flying Time Series Liquid Chromatography after processing.

Results and discussion Compared with Alisma group, the curve of Alcohol A-24-acetate was still bimodal. However, it was found that the first peak time (T_{max}) of the A-24-acetate was prolonged and the peak concentration (C_{max}) did not change significantly. The results showed that the effect of the combination of Citizen Zygren on the concentration of A-24-acetate in the evening was not obvious. However, AUC_{0-t} increased significantly, the elimination rate CL decreased, and was statistically significant (P < 0.05), indicating that the compatibility of Alisma alcohol A-24-acetate the first peak time to extend. At the same time, plasma clearance rate decreased, extending its role in the body time. It can be concluded that the degree of absorption of Alcohol A-24-acetate in the Citrobenezene group was higher than that in the Alisma orientalis group and the plasma clearance rate was decreased.

References:

- [1] Peng G P, Lou F C. Isolation and identification of diterpenoids from Alisma orientalis [J]. Acta pharmaceutica sinica. 2002, 37: 950-954.
- [2] Zang Ping. Alisma research status and prospects [J]. Chinese Traditional Medicine Modern Distance Education, 2009, 7 (6): 180-182.
- [3] Wang Lixin, Wu Qidan, Zhang Qiao, etc. Alisma diarrhea in the study of active substances [J]. West China Pharmaceutical Journal, 2008, 23 (6): 670-672.
- [4] Gu Shijian, Wu Juan, Liu Dongyue, Liu Ping, Fang Nianbo, Yu Shangong. Alisma Decoction on mice blood pressure experimental study [J]. Shi Zhenguo medicine, 2010, 02: 272-273.
- [5] Yu Xiangyun, Zhong Jianhua, Zhang Xu. Alisma lipid-lowering pharmacological effects and material basis [J]. Chinese Journal of Traditional Chinese Medicine, 2010, 11: 250.
- [6] YIN Chun-ping, WU Ji-zhou. Advances in immunoregulation of Alisma orientalis and its active components [J]. Chinese Traditional Medicine, 2001, 32 (12): 1132-1133.
- [7] ZHANG Rui-fang, WAN Jian-xin, XU Yan-fang, YOU Dan-yu, CUI Jiong, PAN Yang-bin. Effects of Alisma alcohol B on C3a-mediated human renal tubular epithelial cell mesenchymal transdifferentiation [J]. Chinese Journal of Integrated Traditional Chinese and Western Medicine, 2012, 10: 1407-1412.
- [8] Wang Zhenhai, An Xizhong, Ren Zengchao. Protective effect of Alisma orientalis on acute liver injury in rats [J]. Chinese Journal of Animal Quarantine, 2010, 09: 56-57.
- [9] Gao Hong, Hu Yinghe. New use of Alisma orientalis found by the method of screening with agonist M1 receptor agonist [P]. Chinese Patent: CN 1615981.

THE PROSPECTS OF ANTI-PLATELET FUNCTION OF ASPIRIN

Jin Wang, Xue -Ying Yan*, Yan-Hua Zhu, Hui Su

Heilongjiang University of Chinese Medicine, P.R.China 150040; *Corresponding author: Xue-Ying Yan, Address: Heping Road 24, Harbin 150040, School of Pharmacy, Heilongjiang University of Chinese Medicine, P.R.China E-mail: XMN1120@163.com

Abstract Aspirin is integral to the secondary prevention of cardiovascular disease and acts to impair the development of platelet-mediated atherothromboembolic events by irreversible inhibition of platelet cyclooxygenase-1 (COX-1). Although aspirin is still effective, a large number of patients will still occur atherosclerotic thromboembolic events. Besides that about 10% of patients do not respond to aspirin, this phenomenon is called "aspirin resistance". In this paper, we discuss the mechanism of aspirin resistance with these factors involved in aspirin resistance, and then analyze the potential mechanism of antiplatelet function, and provide a potential theoretical basis for promoting the formation of new antithrombotic drugs.