and SFG tablets and sonicated for10 min. The obtained plasma was stored at -4℃ untilanalyzed.

Results and Conclusion The UPLC method ,which linear relationship was good and stable,was used to establish aquantitative analysis method of SFG.The results showed that the dissolution rate of SFG-S-SMEDDS was 50% in the first 10 min and 80% in the 30 min, which was superior to SFG. In vitro experiments showed that SFG-S-SMEDDS could improve the dissolution rate.After oral administration, the SFG self-microemulsion T1/2z was 3.200 h, and the Tmax was 0.792 h , AUC0 → ∞ was 652.977μg×h/mL, and MRT0 → ∞ was 11.278h. Above all , the relative bioavailability of SFG in rats was about 343.84%, which suggested that SFG-S-SMEDDS could improve the bioavailability effectively.As a result,Sophoraflavanone G have a good way to service human-beings.

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*Address for correspondence: Zhixin Yang, College of Pharmacy, Heilongjiang University of Chinese Medicine, No. 24, Peace Road, Xiangfang District, Harbin, 150040, China. Tel: +86 451 87266893. E-mail: zhixin.y@163.com.

The authors are thankful to the financial support of Outstanding Innovative Talents Support Program Project from the Heilongjiang University of Chinese Medicine (No. 2012), Natural science foundation of Heilongjiang Province (No.H2016057, H2017066).

EFFICACY OF ACUPUNCTURE-REHABILITATION THERAPY IN PROMOTING ANGIOGENESIS AND REDUCING INFARCT VOLUME AFTER FOCAL CEREBRAL ISCHEMIA IN RAT BY A MECHANISM OF UP-REGULATING CIAP1 IN MICROVESSELS

ZHU Luwen *, TANG Qiang1, YE Tao2, WANG Yan1, CHEN Huijie2, LIANG Biying2, ZHENG Tingting2

1The Second Affiliated Hospital of Heilongjiang University of Chinese Medicine, Harbin 150001, China

2Heilongjiang University of Chinese Medicine, Harbin 150040, China

Objective: In China, acupuncture-rehabilitation therapy has been widely used in stroke patients with various types of dysfunction treatment, clinical efficacy is significant, its safety and efficacy are confirmed by a large number of clinical and animal studies. In this study, we will explore the effect of acupuncture-rehabilitation therapy on neurological function and Angiogenesis in ischemic penumbra after cerebral ischemic injury in rats, and to explore whether the neuroprotective effect of acupuncture-rehabilitation therapy is related to the up-regulation of cellular inhibitor of apoptosis protein 1 (cIAP1) expression in microvessels.

Methods:90male SPF-level Sprague-Dawleyrats were divided into five groups, namelysham group, model group, acupuncture group, rehabilitation group and acupuncture-rehabilitation group, and 18 in each group. Their middle cerebral arteries were occluded except those of sham group. The sham and model groups accepted no treatment, while the acupuncture group accepted cluster needling of scalp acupuncture, rehabilitation group accepted treadmill training, and the acupuncture-rehabilitation group accepted combined cluster needling of scalp acupuncture and treadmill training. They were assessed with modified Neurologic Severity Score (mNSS) 1day and 14 days after operation; the volume of cerebral infarction was measured by TTC staining; Immunofluorescence double labeling method was used to observe the expression of cIAP1 and CD31 and co-localization of cIAP1 in microvessels (labeled with CD31, which is a microvessel marker); Western blotting was used to detect the expression of cIAP1 and VEGF in peripheral cortex of cerebral infarction at 14 days after operation, respectively.

Results:At 1 day after operation, compared with the sham operation group, the mNSSwas significantly increased(P<0.05) in the model group and each treatment group, while the difference between the groups was not significant (P＞0.05). At 14 days after operation, compared with the sham group, the mNSS was significantly increased(P<0.05) in the model group; the cerebral infarct volume was significantly increased(P<0.05); the mean optical intensity (MOI) of fluorescence expression of cIAP1 decreased(P<0.05), while CD31 increased (P<0.05); and the expression of cIAP1 protein down-regulated(P<0.05), while VEGF protein up-regulated(P<0.05); Compared with the model group, the mNSS was reduced and the cerebral infarction volume was decreased(P<0.05), the MOI of fluorescence expression of cIAP1 and CD31increased (P<0.05), and the expression of cIAP1 and VEGF protein up-regulated(P<0.05) in each treatment group, and the acupuncture-rehabilitation group is most obvious (P<0.05) compared to the acupuncture group and rehabilitation group.

Conclusion: acupuncture-rehabilitation therapy can reduce the neurological deficit, reduce the volume of cerebral infarction and play a neuroprotective effect after cerebral ischemia in rats, which is superior to simple acupuncture or rehabilitation therapy. The potential mechanism of action is related to the up-regulation of cIAP1 expression in microvessles, and promoting angiogenesisin peripheral cortex of cerebral infarction.

Key words: cerebral ischemia; acupuncture-rehabilitation therapy; neurological function;angiogenesis; cIAP1; CD31;rats

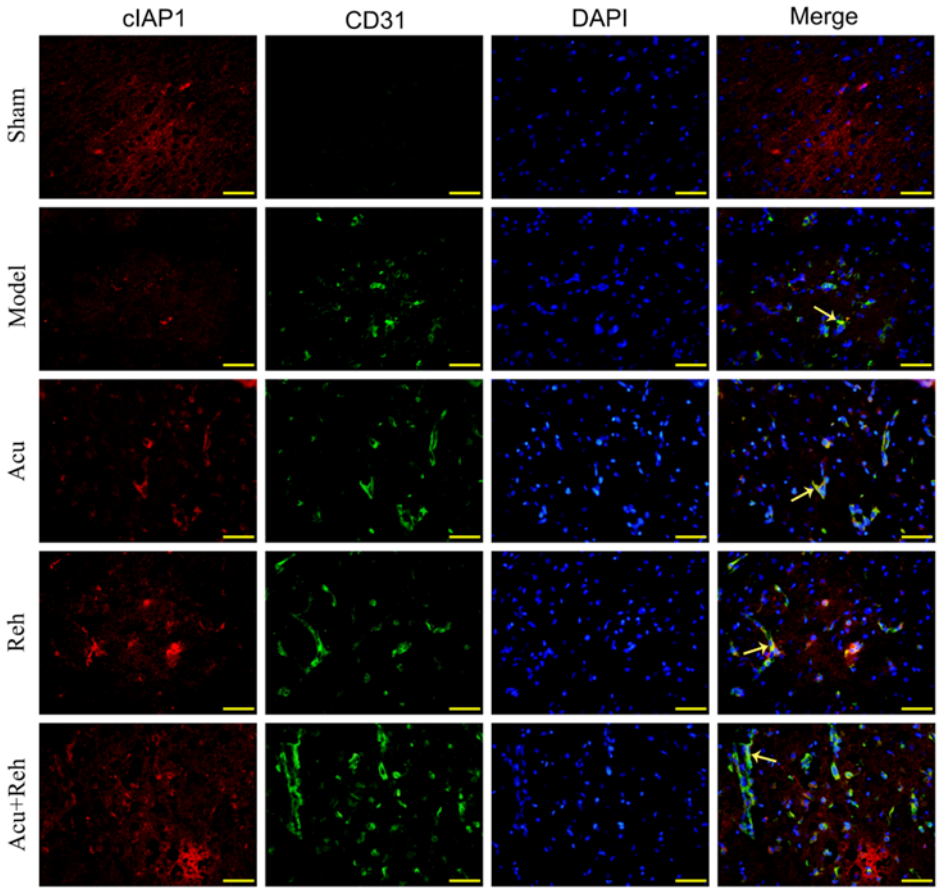

Fig 1 Immunofluorescence double labeling of cIAP1 and CD31

Note: cIAP1(Red), CD31(Green), DAPI(blue). The yellow arrows refer to co-localization cells of cIAP1 and CD31.

UDC 616.018 DOI 10.22448/AMJ.2017.3.109-110

LOCALIZATION OF CALCIUM CATIONS IN THE LUNGS WITH ANTIORTHOSTATIC HANGING OF RATS

Zinoviev S.V., Tseluyko S.S.

Amur State Medical Academy, Blagoveshchensk, Russia

Summary. Outbred male rats underwent experimental exposure to hypogravitation for 10 days. It has been established that experimental hypogravitation has a significant effect on calcium metabolism in rat lungs.

Key words: lungs, hypogravitation, calcium cations

Introduction. Weightlessness has a significant effect on calcium metabolism. The features of calcium metabolism in the respiratory organs during weightlessness remain unexplored. The aim of the study was to evaluate the histophysiology of calcium cations in the left lung of rats at the time.

Materials and methods of research. The object of the study was outbred male rats weighing 240 grams at the age of 3 months. The first group is control (10 animals). The second group (10 animals) was subjected to experimental effects of hypogravitation for 10 days [1]. Lungs rats were stained in 5% alcohol solution of alizarin red C [2]. Cryostat sections were made from lungs rats. Estimation of the color of alizarin included the calculation of the average cytochemical coefficient according to the formula: ACC = (4 ball × quantity + 3 ball × quantity + 2 ball × quantity + 1 ball × quantity + 0 ball × quantity / 100 Fields of view.

Results of the study. At the beginning of the examination, the organs of the thorax are examined. In the root of lungs rats there are no lymph nodes. Lungs rats drain right and left, caudal mediastinal lymph nodes located along the cranial hollow veins. Visual assessment of the lungs significantly clarifies the assessment of calcification in the lungs, it allows to exclude the infectious process. When staining with alizarin, it was found that in the wall of the caudal vein of the left lung of rats there are 2 layers of cardiomyocytes. Outer layer, longitudinal - 4 rows of cells. Internal, the layer circular -