

Supplementary Materials

Supplementary experimental procedures

Angiography by MRI

Rats were anaesthetized for MRI (PharmaScan 70/16 US, Bruker, Germany) to obtain angiography. The protocol for computed tomography angiography (CTA) was a TOF_3D_FLASH, and the detailed parameters are as follows: TR/TE = 18/3ms, field-of-view $25 \times 25 \times 25$, image size $256 \times 256 \times 128$, and slice thickness 25 mm according to the protocol. The clear hyperintensity showed that there was normal and smooth blood flow in the vessel.

Blood coagulation function analysis

Approximately 2ml blood samples were collected and anticoagulated with sodium citrate for blood coagulation function analysis. A Coagulation Analyser Stago Evolution (Stago, France) was used for the measurement of Fibrinogen concentration (Fib), prothrombin time (PT), activated partial thromboplastin time (APTT), thrombin time (TT), which were essential parameters in blood coagulation function [1].

Supplementary Figures

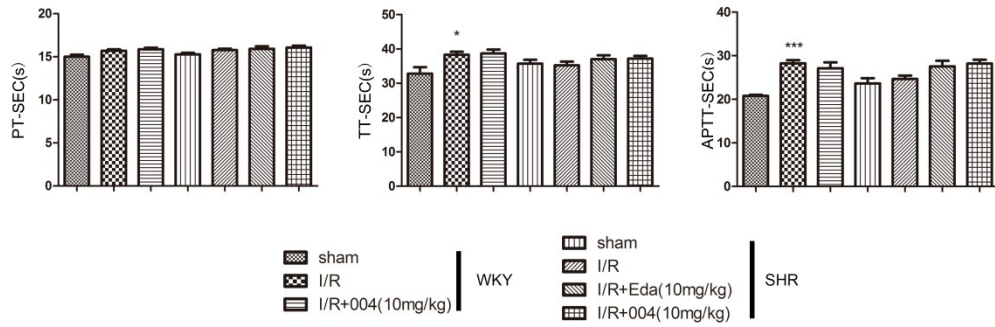


Figure I. 004 showed no obvious effect on the impaired blood coagulation function. Although there were significant changes in some blood coagulation indices such as TT and APTT between I/R and sham group in WKY rats, 004 showed no obvious ameliorating effects in these parameters. $n=10$ in each group. * $P < 0.05$, *** $P < 0.001$ vs. sham. Values expressed as mean \pm SD.

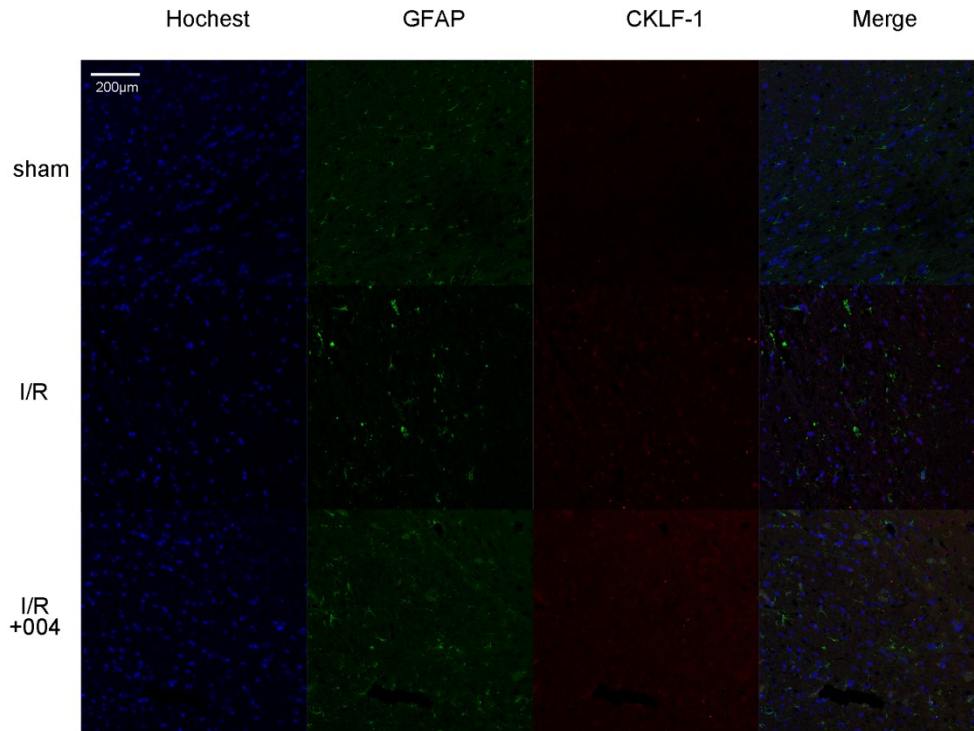


Figure II. Astrocytes(GFAP⁺) did not exert a colocalization with CKLF1 in the ischemic

region of the brain of SHR rats. Scale bar = 200 μm .

Supplementary Videos

Video I. The establishment of MCAO was confirmed by CTA. The blood vessels which were full of normal flow was seen as hyperintensity. The 3D-brain flow model rotated so that it could be clearly monitored. The right internal carotid artery(ICA) was inserted with a 0.38mm nylon filament so there is no bloodstream in the right ICA(red asterisk) while the bloodstream remained the same in the left ICA(yellow asterisk). The right middle cerebral artery (MCA) was blocked so there is no bloodstream in the right MCA(red arrow) while the bloodstream remained the same in the left MCA(yellow arrow). The bottom rat heads imitate the observer's view angle.

Supplementary References

1. Gong JM, Shen Y, He YX. Reference Intervals of Routine Coagulation Assays During the Pregnancy and Puerperium Period. *Journal of clinical laboratory analysis*. 2016;30(6):912-7.