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Radix *Morinda officinalis* and *Cortex cinnamomi* treat depression by up-regulating 5-hydroxytryptamine, norepinephrine, and dopamine in hippocampus in rats

Yang-zhi Peng[#], Yue Su[#], Yong Jiang[✉]

Basic Medical College, Chengdu University of Traditional Chinese Medicine, Chengdu 610075, China

Background: Chinese herbal medicine have been reported to have less side effects in treatment of depression disorder than Western antidepressants, while the mechanism remains unclear. Our previous studies have shown that combined use of *Radix Morinda officinalis* and *Cortex cinnamomi* have antidepressant effects. **Objective:** To explore the mechanism of combined use of *Radix Morinda officinalis* and *Cortex cinnamomi* in treating depression disorder.

Methods: Sixty SD rats were randomly divided into experimental group, control group, model group and blank group with 15 rats in each group. After establishment of depression models, the experimental group and control group were given the Chinese decoction (2 mL/day) and fluoxetine hydrochloride (2 mL/day) respectively for 3 weeks, meanwhile the model group and blank group were fed with normal saline (2 mL/day). Body weight measurement and sucrose preference test were performed regularly. Finally, the rats were sacrificed after treatment, and the hippocampus were taken to detect 5-hydroxytryptamine, norepinephrine, and dopamine contents.

Results: The experimental group showed increased body weight and sucrose consumption than the other groups. Higher 5-hydroxytryptamine, norepinephrine and dopamine contents were also observed in the experimental group than other groups.

Conclusions: The antidepressant effects of *Radix Morinda officinalis* and *Cortex cinnamomi* decoction may show antiexpression effects by up-regulating content of 5-HT, NE, and DA in rats' hippocampus.

Keywords: *Radix Morinda officinalis*; *Cortex cinnamomi*; Depression disorder; Mechanism

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[#]These authors contributed equally to this paper.

✉Corresponding author: Dr. Yong Jiang, Basic Medical College, Chengdu University of Traditional Chinese Medicine, Twelve bridges 37, Chengdu, Sichuan province, China.
E-mail: jiangyong@cdutcm.edu.cn

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