The Effect of *Angong Bezoar Pill* for Nitric Oxide Synthase and Monoamine Neurotransmitter in Brain Tissue of Rats’ Brain Hemorrhage Acute Stage

YANG Wen-qing1, REN Yu-lu1, GUO Ke-feng1, et al
1Tangdu Hospital Fourth Military Medical University (Xi’an 710038)
2Health Vocational Technological College Qinghai (Xinlin 810000)

**Abstract**  
**Objective:** To explore the effects of *Angong Bezoar Pill* for nitric oxide synthase and monoamine neurotransmitter in brain tissue of acute stage of rats’ brain hemorrhage. **Methods:** To found the model of rats’ brain hemorrhage acute stage. After brain hemorrhage 4, 24, 72h, the content and the change of nitrogen monoxide, nitric oxide synthase in brain tissue and F.A., DA, 5 – HT in seahorse and cerebral cortex were observed. **Results:** After injury 4h, the content of NO increased. The activity of NOS heightened and 72h reached peak. The content of NO and the activity of NOS of *Angong Bezoar Pill* group degraded obviously, compared with serum of calf deproteinization and model group. After brain hemorrhage 4h, the content of monoamine neurotransmitter was depression, among the total 24h decreased most obviously. After 72h, the *Angong Bezoar Pill* group the content of monoamine neurotransmitter markedly heightened and the effect was better, compared with serum of calf deproteinization and model group. **Conclusion:** The *Angong Bezoar Pill* can protect brain tissue from rats’ brain hemorrhage acute stage.

**Key words**  
Brain hemorrhage; Nitric oxide; Nitric oxide synthase; Monoamine neurotransmitter; *Angong Bezoar Pill*
1. The study aimed to evaluate the impact of An gong nü huang pill on the levels of noradrenaline and dopamine in the brains of rat models of cerebral hemorrhage. The results indicated that the pill can significantly increase the content of noradrenaline and dopamine compared to the control group. The statistical analysis revealed a significant difference (P < 0.05) between the model group and the drug group, indicating the effectiveness of An gong nü huang pill in improving the levels of these neurotransmitters.

2. The discussion section emphasizes the importance of maintaining a balance between oxidative stress and antioxidant defense mechanisms in the brain. The elevated levels of nitric oxide (NO) and decreased levels of superoxide dismutase (SOD) and glutathione peroxidase (GSH-Px) in the model group compared to the normal control group suggest a shift towards oxidative stress. The administration of An gong nü huang pill reversed these changes, indicating its potential in mitigating oxidative stress and improving antioxidant capacity.

3. The tables summarize the mean levels of noradrenaline and dopamine in the brains of rats treated with different interventions. The data show a significant increase in noradrenaline and dopamine levels in the drug group compared to the model group (P < 0.05). The results also highlight the protective effects of An gong nü huang pill in maintaining normal neurotransmitter levels in the brain.