

Antidepressant Effect of Brahmi Ghrita Prepared from Puran Go-ghrita and Fresh Go-ghrita (Cow Ghee) in CUMS Animal Model

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ABSTRACT

Introduction: Inter-relation exists between life-events related to stress and reaction of body to these events and onset of clinical depression. CUMS (Chronic Unpredictable Mild Stress) experimental animal model produce situation similar to clinical depression for pre-clinical evaluation of anti-depressants. Brahmi ghrita, a unique herbal lipid based Ayurvedic medicinal formulation indicated in treatment of Unmada (pre-monitory symptoms of Unmada are correlated with disease depression), possessing Brahmi (*Bacopa monnieri*) and Ela (*Elettaria cardamomum*) as the key ingredients. Thus present study was aimed to assess the anti-depressant potential of BG I (prepared from Puran Go-ghrita (ten year old cow ghee)) and BG II (prepared from Fresh Go-ghrita).

Method: Wistar rats were randomly allocated in seven groups. Non-stressed control animals had no contact with the stressed group. Another six groups were exposed to sequential stress pattern to induce depression in them. Test drugs Puran ghrita, BG I, Fresh Go-ghrita and BG II in dose of 0.72 mg/200g, were administered orally for 28 days. Standard drug (imipramine hydrochloride) in dose of 10 mg/kg and CUMS group with normal saline.

Behavioral deficit was assessed by number of rotations using Forced Swim Test (FST) and sucrose consumption percentage using Sucrose Preference Test.

Result and discussion: Daily administration of all test drugs during the course of CUMS significantly ($p < 0.0001$) suppressed the behavioral changes induced by CUMS. BG I and BG II had significant difference ($p < 0.05$) compared to Puran Go-ghrita and Fresh Go-ghrita. However no significant difference was observed between BG I, BG II and standard drug. Thus Brahmi Ghrita showed anti-depressant activity induced by stress in CUMS animal model. However, further studies regarding mechanism of action and clinical exploration is needed.

Keywords: Brahmi ghrita, Puran ghrita, Cow ghee, CUMS, Depression, Anti-depressants

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