

Effect of *Unmadagajakesari rasa* on biochemical parameters of patients with *Kaphaja unmada* (Major Depressive Disorder)

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Abstract

Major depressive disorder is one of the most prominent mood disorders affecting both psychic and physical bodies. The World Health Organization emphasized that depression is the fourth most disabling health issue worldwide and affects more than 350 million of global population. The symptoms of major depressive disorder are mostly similar to those of *Kaphaja unmada* mentioned in Ayurveda authentic texts. The present study focused on effects of *Unmadagajakesari rasa* on serum biochemical parameters of the patients who have major depressive disorder and was designed as a one group pre-test, post-test study. In the present study, forty patients were administered the trial drug, *Unmadagajakesari rasa* 250 mg, daily for eight weeks and were assessed by using Hamilton Depression Rating Scale before and after the treatment. Moreover, serum biochemical parameters of the patients were measured before and after the treatment. Accordingly, the mean scores of serum glutamic pyruvic transaminase, serum glutamic oxaloacetic transaminase, blood urea, and serum creatinine of the patients before the intervention were approximately as same as those after the intervention. On the contrary, at the end of the treatment, the mean scores of the serum level of dehydroepiandrosterone sulfate indicated statistically significant decrease in male patients, whereas, it did not indicate statistically significant mean difference in female patients. In view of the above, it can be concluded that *Unmadagajakesari rasa* is a safe medicine; furthermore, serum dehydroepiandrosterone sulphate (DHEAS) can be considered as a probable bio-marker in the diagnosis of *Kaphaja unmada* with special reference to major depressive disorder for male patients.

Keywords: Major depressive disorder, DHEAS, Ayurveda, *Unmadagajakesari rasa*

Introduction

Depression, a significant contributing factor to the global burden of disease, is the fourth most disabling medical condition worldwide and is expected to be ranked second by 2020^{1,2}. The World Health Organization stressed that the burden of depression is 50% higher for females than males³. Among global patients who have depression, almost one million of them get committed suicide, which translates to 3000 suicide deaths every day. Of those patients who commit suicides, 20 or more of them attempt to contemplate suicide⁴. The recent epidemiological study explored that the lifetime prevalence of depression in Sri Lanka is 6.6%⁵. In contrast to the above fact, depressive symptoms have been found to be present among 57.7% of school-going adolescents in Sri Lanka⁶. Furthermore, Genetic analysis data of Sri Lanka also stated that female patients with depression have higher heritability than that of male patients.

The main symptoms of major depressive disorder (MDD) are depressed mood, markedly diminished interest or pleasure, significant weight loss when not dieting or significant weight gain, decrease or increase in appetite, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or excessive or inappropriate guilt, diminished ability to think or concentrate, indecisiveness, etc.⁷. Correspondingly, the main symptoms of *Kaphaja unmada* (KU) are mentioned to be *Vakmandata*, *Chestamandata*, *Tushnimbahava*, *Arochaka*, *Svapnanityata*, *Agnisada*, *Sadana*, etc.⁸. In consideration of the above facts, the symptoms of *Kaphaja unmada* which are described in Ayurveda authentic texts are considered to be mostly similar to those of MDD; furthermore, KU has been correlated with MDD in previous studies^{9,10,11}. Pharmacological agents are the main treatment modalities for MDD and antidepressants are the drugs

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