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***Boophone disticha* attenuates acute stress induced perturbations in the liver and kidneys of male Balb/c mice model of stress**

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Introduction: Depression, resultant from persistent stress is a deleterious mental health disorder affecting approximately 5% of the global population, with a lifetime prevalence ranging from 15% to 20%. Selective Serotonin Reuptake Inhibitors (SSRIs) are the standard first-line pharmacological treatment, however, their high cost and limited accessibility in many African countries have led to the widespread use of traditional herbal remedies. *Boophone disticha* (BD), a plant commonly used in traditional medicine for its reported antidepressant effects, has also been associated with potential toxicity. Despite its frequent use, there is a lack of in vivo data regarding the safety and efficacy of BD on vital organs such as the liver and kidneys in stress conditions. This study investigated the effects of hydroethanolic extract of BD on the liver and kidneys in a mouse model of stress.

Materials and Methods: Fifty-six male Balb/c mice were subjected to either five-day repeated forced swimming stress (5d-RFSS) or 28-day chronic restraint stress (CRS). Post-stress, mice were grouped for treatments and received daily treatments for 21 days with either distilled water (vehicle), 10 mg/kg fluoxetine, or 10 mg/kg BD. Following treatment, liver and kidney tissues were harvested for histological analysis using Masson's Trichrome, Hematoxylin and Eosin stains. ImageJ software was used to measure renal space, kidney tubular epithelial areas, hepatocyte areas, and connective tissue are fractions. Statistical comparisons were conducted using SPSS.

Results: 5d-RFSS caused mild histological changes in both liver and kidney tissues, which were attenuated by BD, similar to fluoxetine. In contrast, chronic stress caused more severe alterations in tissue architecture, which were not attenuated by either BD or fluoxetine.

Conclusion: BD attenuates the effects of acute stress on liver and kidney tissues without tissue damage but it's not effective against chronic stress-induced histopathological changes.