ANTIDEPRESSANT ACTIVITY OF SGLT – 2 INHIBITORS IN ALBINOMICE, AN EXPERIMENTAL STUDY

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ABSTRACT

Objective

To evaluate the antidepressant activity of SGLT-2 inhibitors in mice.

Methods

Sixty adult Swiss albino mice weighing 25-30 grams were selected. Thirty were allocated to forced swim test and thirty to tail suspension test models. In each model, there were 4 groups. The control group received vehicle (10 ml/kg, p. o) as standard, Imipramine (10 mg/kg, p. o) and the two test groups received dapagliflozin and capagliflozon respectively 1 hour prior to the acute study. In chronic study, the drugs were given orally once a day for 10 days and the last dose was given 1 hour before the experiment. Duration of immobility was noted in forced swim test and tail suspension test. Statistical analysis was performed using Mean +/- SEM. ANOVA followed by Dunnett’s test. P< 0.05 was considered statically significant.

Results

SGLT-2 inhibitors produced a significant antidepressant effect at all the doses, as indicated by the reduction in the duration of immobility compared to the standard. The antidepressant effect was higher with dapagliflozin when compared to capagliflozon and control.

Conclusions

SGLT-2 inhibitors has shown significant antidepressant activity greater than imipramine in mice.

KEYWORDS: Forced Swim Test, Tail Suspension Test, Statins, Depression & Geriatric Patients

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