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PROTECTIVE PROPERTIES OF SILYMARIN AGAINST THE TOXIC EFFECTS OF VALPROIC ACID IN THE HEART

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The aim of this study was to investigate the protective effect of silymarin against the effects of valproic acid (VPA) in the heart of rats, which is used as a common antiepileptic in the treatment of epilepsy. VPA is a substance consisting of an eight-carbon fatty acid called dipropylacetate for the treatment of epilepsy. It is used in both partial and generalized epilepsy because it is effective in many seizures such as myoclonic, atonic, absorptive, tonic and tonic-clonic. Moreover, exposure to VPA has been shown to induce cardiac malformations in rats. It, due to its similarity to GABA, an inhibitor amino acid, inhibits GABA transaminase and reduces GABA withdraw from the presynaptic junction by increasing the amount of GABA in the synaptic junction. Silymarin is known to have a positive inotropic effect on the perfused adult rat heart. For 14 days, rats were divided into 3 groups as placebo control, VPA, VPA+silymarin. The group were given 500 mg/kg/day from VPA or/and 100 mg/kg/day from silymarin for 14 days, except placebo control group. At 15 day, all animals were sacrificed after blood samples collected to assay of biochemical parameters such as glucose, albumin, amylase, bilirubin, calcium, total cholesterol, creatinine and triglyceride. All statistical analyzes were calculated by S.E.M $\pm$ in the graph-pad prism program and $p < 0.05$ was found to be statistically significant. Total cholesterol, albumin, amylase and creatinine count significantly increased in the VPA+silymarin group but in the VPA group it's count statistically decreased compared to placebo group.

BIOGRAPHY

Ibrahim Aktas has completed his PhD from Ankara University, Turkey. He has three publications, his study is about pharmacokinetic, anti-analgesic, assay of biochemical parameters and doxorubicin. He has been working since 2017 at Adiyaman University.

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