Abstract

Synthetic medications have many advanced qualities and cure a wide range of illnesses because of their side effects people restrain to use them so we moved to herbal treatments. According to ayurvedic texts, herbs are used to treat a variety of illnesses. In our experiment, FTIR was used to gather the functional properties of plant extract. Fifty four male Swiss albino mice were divided into 9 groups and used to evaluate the anti-inflammatory efficacy of *Cordia gharaf.* All of the mice were fed on a normal diet and distilled water *ad libitum*. Group I was the control group without any dose and treatment. All other groups received alternate iron induction for 10 days. Group II was left untreated after the induction of iron. Group III was treated with synthetic drug for 21 days. All other groups received the various medications doses for 21 days, provided orally following the iron induction. The mice activities were assessed through blood tests (ALT, AST, ALP, Serum Iron and Serum Ferritin) after the completion of experiment. The blood tests showed the significant higher level of enzymes and iron in blood after the iron induction. While, after administrating them with herbal and combination of herb and synthetic drug treatment, they revealed prominent decrease which showed their anti-inflammatory effects. After experiment, the mice were sacrificed in order to conduct further histological examinations. The histology of brain, liver and kidney revealed a neuronal pyknosis, degenerated hepatocytes and shrunken glomerulus in iron overload group respectively. All of the other treated groups, however, exhibited no such severe alterations. As a result, it was concluded that *C. gharaf* could be safer to use as anti-inflammatory medication.