



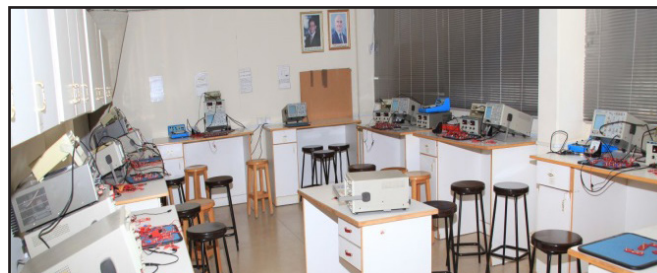
Evaluation the iron chelating activity of methanol extract of akoub (*gundelia tournefortii*) in iron overloaded experimental rats

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Abstract:

Akoub (*Gundelia tournefortii*) reported to have hypoglycemic, laxative, sedative, anti-inflammatory, anti-parasite, antiseptic and emetic effects. Compounds found in *gundelia* proved to have several pharmacological effects, e.g. antibacterial, anti-inflammatory, hepatoprotective, antioxidant, antiplatelet and hypolipemic activities. The observed pharmacological properties indicated a close association of these effects with infectious diseases, digestive disorders, high blood pressure and cancer. The present study was planned to evaluate beneficial effects and mechanism of action of *gundelia tournefortii* on iron overload animals. Methanol extracts of *gundelia tournefortii* was found to be contains phenolic contents and also possess in-vitro iron chelating activity. Fifty adult male wistar rats were randomly divided to 5 groups: healthy control, iron overload treated with deferoxamine, iron overload treated with 100 mg/kg and 200mg/kg of methanol extract of akoub (*gundelia tournefortii*) respectively. Assessments were performed for serum iron, ferritin, and serum markers of hepatic and cardiac damages, antioxidant enzyme and lipid peroxidation levels. The results indicated serum iron and ferritin concentration were significantly increased in the iron overload group compared to healthy controls ($P < 0.05$). Treatment with the *gundelia tournefortii* extract significantly decreased iron and ferritin concentration ($P < 0.05$) and significantly decreased biochemical parameters, such as alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase (ALP), lactate dehydrogenase (LDH) and creatine phosphokinase (CPK), and improved tissue damage and decreased iron accumulation in the liver compared to the iron overload group ($P < 0.05$).



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