

Study of date seed extract(*Phoenix dactylifera*) variete; Deiri Abadan liver protective effect against carbon tetrachloride toxicity in male rats

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Background and Amis: Liver is the largest gland in the body and plays an important role in normal function of the body. Liver diseases are the most common diseases in Iran and other countries, nearly 3 to 5 percent of the population of Iran suffer from it. Liver protective agents are under intensive investigations and among them are the compounds that have natural origin and rich in antioxidant capacity. In this study, protective effect of date (*Phoenix dactylifera*) seed extract on liver hepatocytes of rat has been evaluated. Previously, it was shown that this extract could have anti-inflammatory, anti-tumor and peptic ulcer protective effects.

Methods: For this study, Rats were divided into six groups and instead of the negative control group (receiving carbon tetrachloride and carrying extract) and control (receiving carrier), groups 100, 500, 1000 and 2000 mg/kg of date seed methanol extract was evaluated. and orally taken twice daily for four consecutive day to Rat and noon the fourth day exposed to 0.5 ml/kg carbon tetrachloride intraperitoneally, Blood was collected on fifth morning and activities of AST (SGOT) and ALT (SGPT) enzymes were determined.

Results: Evaluation of serum concentration of AST and ALT in different groups of rats showed that the mean concentration serum AST in negative control group, control and control groups with doses 100, 500, 1000 and 2000 mg/kg of extract respectively 780, 140, 730, 390, 235 and 160 IU/ml, and for ALT respectively, 680, 110, 530, 360, 195 and is 160 IU/ml.

Conclusions: Evaluation of results showed that doses of 1000 and 2000 mg/kg date seed extract in comparison with negative control group, protective effect against toxicity caused by carbon tetrachloride is acceptable. And this could be due to antioxidant's effects of date seed that can inhibit radicals created by carbon tetrachloride.

Keywords: Date seed extract; Liver protection; Rat; Antioxidant