

Comparison between the effects of Berberis Vulgaris aqueous extract and Lovastatin drug on Liver Enzymes in hyperlipidemic mice

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Abstract

Background & Aim: Barberry has various antioxidant compounds and hypolipidemic properties. This study was carried out to compare the effect of Barberry's aqueous extract and Lovastatin on reduction of liver indices enzymes level in hyperlipidemic mice serum treated with high fat diet.

Methods: In this study, 60 male mice were divided randomly into 4 groups. Control group was not feed. Negative control group which were hyperlipidemic and considered as the main control group. Positive control group treated with high fat diet and received specific dose of Lovastatin at the same time. The treated group fed with high fat diet and aqueous extract of *B.vulgaris* (80 mg/kg). At the end of 30 days, blood sampling was done from the heart of the mice and the level of liver enzymes was measured. Data were analyzed using statistical analysis.

Results: Based on the results, the level of ALP enzyme increased in the group treated with Barberry aqueous extract compared to the negative control group ($p \leq 0.05$), whereas the level of ALT and AST enzymes decreased ($p \leq 0.05$) which was similar to Lovastatin effect. On the other hand, there was no significant difference in the level of enzymes between positive control and treated groups.

Conclusion: Overall, despite the fact that *B. vulgaris* aqueous extract and Lovastatin had similar effect on reduction of the liver enzymes level, the use of *B. vulgaris* aqueous extract is preferred due to the fewer side-effects.

Keywords: Berberis Vulgaris, Liver Enzymes, Mouse, Hyperlipidemia