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## Lemon balm: A promising herbal therapy for patients with borderline hyperlipidemia—A randomized double-blind placebo-controlled clinical trial

Parisa Jandaghi<sup>a</sup>, Mostafa Noroozi<sup>a</sup>, Hamidreza Ardalani<sup>b,\*</sup>, Mahmoud Alipour<sup>c</sup>

<sup>a</sup>Children Growth Research Center, Qazvin University of Medical Sciences, Qazvin, Iran

<sup>b</sup>Department of Horticultural Sciences, Science and Research Branch, Islamic Azad University, Tehran, Iran

<sup>c</sup>Department of Statistics and Epidemiology, Faculty of Medicine, Qazvin University of Medical Sciences, Qazvin, Iran

### ABSTRACT

*Objective:* *Melissa officinalis* is a perennial herb from the Lamiaceae family which has shown to have modulating effects on serum lipid profile. The aim of the current study is to explore the effects of *M. officinalis* supplementation on serum biochemical parameters of patients with borderline hyperlipidemia.

*Methods:* 58 hyperlipidemic patients were allocated randomly to 2 groups: first group received capsules containing 1000 mg *M. officinalis* leaf powder (MO group), and the second group received placebo capsules (P group) 3 times per day for 2 months. Fasting blood glucose (FBG), HDL, LDL, Triglyceride, Creatinine and liver function enzymes including AST and ALT were evaluated before and after study.

*Results:* The mean of LDL in MO group significantly decreased compared with P group after the supplementation ( $P = 0.02$ ). Although the level of Cholesterol, FBG, HDL, Triglyceride, Creatinine and ALT did not show significant difference between two groups after 2 months ( $P \geq 0.05$ ), the level of AST exhibited a significant difference between two groups ( $P = 0.009$ ).

*Conclusions:* Our findings demonstrated that *M. officinalis* supplementation as a rich source of antioxidants and bioactive compounds can be effective in remission of LDL and AST levels in patients with borderline hyperlipidemia.

**Keywords:** Lemon balm, *Melissa officinalis*, Blood glucose, Hyperlipidemia, Lipid profile, Liver enzyme

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