

Medicinal Uses of *Melissa officinalis* (Lemon Balm)

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Abstract

Melissa officinalis is commonly used around the world. Various studies have indicated the different properties of this herb. This article briefly describes the various properties of this plant as well as various related studies.

Keywords: *Melissa officinalis*; Lemon Balm; Herbal Medicine

Introduction

Herbal medicines are used in the treatment of many diseases as conventional medicines [1]. Complementary medicine measures have less side effects than pharmacological measures [2]. *Melissa officinalis* or lemon balm is a family of Lamiaceae family and is native to different parts of the world, including Iran [3]. All vegetative parts of the plant are used for pharmaceutical applications. The herbaceous nature of the herb is warm and dry. The effects of this plant are due to inhibition of cholinesterase activity, acetylcholine stimulation and GABA receptor [4]. This herbal medicine has a sedative, antioxidant and antispasmodic effect and is used as a tranquilizer [5]. The use of this medicinal herb in sleep disorders has been approved by the German Commission E [6]. According to recent studies, lemon balm improves anxiety, stress and depression in rats, and in humans, it reduces anxiety and stress as well as sleep disturbances [7]. Lemon balm leaves are used to relieve spasm. In human studies, the high dose of lemon balm (600 mg / kg) is reported to increase calmness. In addition, the plant has anti-anxiety effects by reducing the concentration of corticosterone in the brain [8]. In addition to anxiety and sleep, nervous disorders such as Alzheimer's, digestive disorders such as indigestion, heart disorders such as

palpitation, infections such as genital herpes, menstrual disorders and cancer [9,10]. In addition, it has been used as a memory and cardiac enhancer, antidepressant, lipid and sugar lowering, analgesic and as a regulator of mood and cognitive function [5,11]. It has been proven that lemon balm extract, in comparison with other herbs in the family of lamiaceae, contains a significant amount of antioxidant compounds. Today, scientists have done a lot of research on *Melissa officinalis*. A study was conducted to investigate the effect of *Melissa officinalis* hydroalcoholic extract on CaCl₂-induced arrhythmias in rats. The heart rhythm and the incidence of VPB, VT and VF significantly decreased in the extract groups (with the highest activity at 200 mg / kg) compared to the control group. The results showed that lemon balm has protective effects on the heart [11]. Joukar et al. investigated the effect of marijuana on cardiac conduction and fatal ventricular arrhythmia. The results showed that PR, QTc and QRS intervals in lemon balm and amiodarone groups increased. PR and QTc were significant only in the amiodarone group and QRS was significant only in the group receiving 400 mg of lemon balm compared to the control group. During the reperfusion period, reduction of ventricular fibrillation significantly decreased in all groups (except for the 400 mg group) compared with the control group. The severity of arrhythmias also decreased,

but only in the amiodarone group was significant compared to the control group. It was concluded that lemon juice extract has a mild protective effect against fatal ventricular arrhythmias due to reperfusion in rats [12]. A study by Jandaghi et al. was conducted to determine the effect of lemon balm on sugar, cholesterol and triglyceride. The results of this study showed that lemon balm powder had no significant effect on fasting, cholesterol and triglyceride parameters [13]. The study of Cases and colleagues aimed to determine the effect of lemon balm extract on the treatment of people suffering from anxiety and insomnia. The initial outcomes were a 15% reduction in anxiety symptoms and a 42% reduction in insomnia. In total, 95% responded to treatment, of which 70% had a complete recovery of anxiety symptoms and 85% had complete recovery from insomnia symptoms [14]. A study by Bhat et al. aimed to determine the effect of anticonvulsant activity of lemon balm in mice showed that the aqueous extract of *Melissa officinalis* may have an anticonvulsant effect in mice [15]. A study by Kennedy et al. aimed at determining the effect of valerian and lemon balm on reducing stress-induced stress markers showed that a dose of 600 milligrams of standardized herbal extract and lemon balm reduced the amount of anxiety, but increased the dose of 1800 milligrams The brief is anxious [16].

Conclusion

The use of plant properties in traditional medicine and the treatment of various diseases has long been used in Iran. Sometimes natural and herbal treatments work better than chemical drugs. Lemon balm is a perennial herb that grows around the world. People have used this plant for centuries to treat diseases.

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