Does Melissa Officinalis Cause Withdrawal or Dependence?

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ABSTRACT

Introduction: Melissa officinalis is a medical and aromatic plant that is used for its hypnotic, sedative, and spasmolytic effects. This report presents a case study of a 30-year-old patient who was admitted to an emergency department with restlessness, tremor, distractibility, and sweating following a discontinuation of Melissa officinalis consumption. Case report: In this case, withdrawal symptoms may be related to the dependence effect caused by long-term use of Melissa officinalis. Although Melissa officinalis, a plant, is preferred by many patients as an alternative to pharmaceutical drugs, patients should be made aware that it may have a risk of dependency and can lead to withdrawal symptoms.

Key words: Melissa officinalis; withdrawal; dependence.

1. INTRODUCTION

Herbal medicine is widely used as both an alternative and complement to pharmaceutical drug therapy. Herbal teas have long been consumed for their presumed anxiolytic, hypnotic, and sedative effects in order to treat several different psychiatric disorders (1). Melissa officinalis L. (lemon balm) is a medical and aromatic plant and is a member of the Lamiaceae family (2). In some countries, melissa tea made from the leaves of lemon balm is used as an alternative therapy to treat migraine, insomnia, and stomach ailments, as well as to strengthen the heart and improve memory (3). Moreover, Melissa officinalis is used for its anxiolytic, hypnotic, sedative, and spasmolytic effects by people practicing traditional medicine (4). Melissa officinalis has cholinergic receptor-binding properties and can modulate both mood and cognitive performance in young, healthy people (5). The herb may, however, potentiate the effects of other central nervous system depressants, such as alcohol (6). Safety of consumption of Melissa officinalis during pregnancy and lactation has not been established (7). Although several reports have been published on Melissa officinalis, there is no reported information, to our knowledge, regarding dependency and withdrawal effects of this herb. Here we report a case which presents probable dependency and withdrawal symptoms after the abrupt discontinuation of Melissa officinalis consumption.

2. CASE REPORT

A 30-year-old married male, a university graduate, applied to the emergency department with complaints of restlessness, tremor, distractibility, and sweating that had lasted approximately 24 hours. His medical history revealed that he was in the stressful period and had been suffering from anxiety symptoms for three months. He had purchased melissa tea (including Melissa officinalis) from an herbalist two months prior in order to help treat his anxiety symptoms. He drank it regularly at night without combining it with another plant-based tea. He stated that he felt relief from anxiety after drinking the tea and felt restless and irritable when he did not consume the tea. Further, over the course of two months, the amount of tea he consumed increased from one cup per day to four cups per day. His symptoms began 24 hours before being admitted to the emergency department, and he did not drink any tea for the two days prior. On psychiatric examination, he exhibited open consciousness, normal orientation, anxious mood, internal restlessness, irritability, and reported decreased sleep, appetite, and concentration. He also experienced an increasingly strong craving for melissa tea. The patient had no history of major medical or mental illness and had no documented alcohol or drug use. His family history was unremarkable. In his physical and neurological examination there weren’t any pathological findings except a postural tremor in both of the patient’s hands. His heart rate was 95 bpm, his blood pressure 120/80 mm/Hg, and his ECG was unremarkable. Multiple tests of complete blood counts, serum electrolytes, hepatic and renal function, thyroid hormone, and urine were all normal. Cranial MRG and EEG were within normal limits.

Withdrawal symptoms took place after stopping consumption of Melissa officinalis. According to the Naranjo Causality Scale (8) (the score was 6) the adverse effects were likely due to Melissa officinalis withdrawal. The patient was diagnosed as a case of "other substance withdrawal".
drawal (Melissa officinalis-related)”. The patient was followed up daily as an outpatient. Clonazepam was started (2 mg/day) and continued for one week. His symptoms improved completely at the end of a 10-day period. He maintained regular follow-up care for six months and exhibited no symptoms of withdrawal in control examinations.

2. DISCUSSION

In this case, there was a clear relationship between the start of the patient’s withdrawal symptoms and the discontinuation of Melissa officinalis consumption. To our knowledge, this is the first reported case of withdrawal symptoms and probable dependency effects related to Melissa officinalis. In this case, the patient’s gradual increase of tea intake is considered to have built up his tolerance for Melissa officinalis. The patient stated that he used melissa tea longer than he had initially planned to. However, he was not diagnosed as dependence on Melissa officinalis because such a diagnosis would require use for a 12-month period, according to DSM-IV. As a result, his symptoms were diagnosed as Melissa officinalis-related withdrawal.

The mechanisms underlying the behavioral actions of Melissa officinalis are inadequately understood. It has been suggested that the active components include flavonoids, monoterpenoid aldehydes, and polyphenolic compounds such as rosmarinic acid (4) and monoterpane glycosides (9). Melissa officinalis inhibits the activity of acetylcholinesterase and GABA-transaminase enzymes, which increase the cholinergic and GABAergic influences, respectively (10). These mechanisms may be related to the sedative, anxiolytic, hypnotic, and cognitive effects of Melissa officinalis. One study, which tested a combination product containing Melissa officinalis and Valeriana officinalis, showed the herbs have a positive effect on quality of sleep. In the same study, the positive effects of Melissa officinalis were shown to be equal to 0.125 mg of triazolam (11). The melissa-valeriana combination was used in a placebo-controlled trial and was found to significantly improve quality of sleep during a 30-day treatment of 600 mg/day (12). Another study, which tested four weeks of Melissa officinalis essential oil aromatherapy on patients suffering from severe dementia, demonstrated a significant reduction in social withdrawal and agitation and an increase in constructive activities (13). The effects of Melissa officinalis were also shown to help improve anxiety, depression, neuroprotectivity, and cognition in many animal studies (14). Furthermore, Melissa officinalis has been shown to modulate mood and cognitive performance in healthy young volunteers, who reported no side effects or symptoms of toxicity (15).

3. CONCLUSION

Although Melissa officinalis is preferred by many people as an alternative to pharmaceutical drugs, it should be noted and explained to patients that the herb may have a dependency risk and can lead to withdrawal symptoms when consumption is abruptly discontinued.

CONFLICT OF INTEREST: NONE DECLARED.

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