

Antidepressant Effects of the Herb *Salvia Divinorum*: A Case Report

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Case Report

Ms. G is a 26-year-old woman with a history of depression that has shown no significant periods of remission since adolescence and has been predominated by feelings of worthlessness, lack of interest in social activities, an absence of occupational satisfaction, and inability to find "purpose and meaning" in her life. After first seeking treatment for her depression 5 years ago Ms. G was prescribed sertraline, 50 mg daily, which she self-discontinued after 3 months, reporting no significant benefits. Ms. G then underwent a course of cognitive-behavioural therapy for about 6 months, with some improvement but no definitive resolution of her symptoms. Hamilton Depression Rating Scale (HAM-D ¹) scores during the 6-month period of cognitive-behavioural therapy were consistently in the moderately depressed range (i.e. 19-21).

During a review consultation some 7 months after discontinuing cognitive-behavioural therapy Ms. G claimed to have found relief from her symptoms of depression with use of the herb *salvia divinorum* sourced through a mail-order herbal supplier. A HAM-D score of 2 confirmed remission of her symptoms of depression at this time. Ms. G claims that she discovered its antidepressant effects accidentally after smoking the herb and had later developed a method of oral consumption which she claimed maintained its antidepressant effects even after she abstained from using it for up to a week.

Despite being cautioned against use of a herb whose safety profile was unknown, she has continued to use a preparation of *salvia divinorum* leaves taken as an oral dose of 2-3 leaves (1/2 to 3/4 of a gram of leaf material) three times per week (the leaves are chewed and held in the mouth for 15-30 minutes). During this period she has continued to show a total remission of her symptoms of depression according to HAM-D scores in the range of 0-2 and has maintained this improvement for the last 6 months, showing no signs of relapse and reporting only minimal side effects, such as occasional lightheadedness for up to 1 hour after using the herb.

Ms. G volunteered that she has also benefited from occasional intoxicating oral doses of *salvia divinorum*, consisting of from 8-16 leaves of the herb (approximately 2 to 4 grams), claiming that this herb had engendered a kind of "psychospiritual" awakening, characterized by the discovery of the depth of her sense of self, greater self-confidence, increased feelings of intuitive wisdom and "connectedness to nature."

Discussion

Salvia divinorum is a perennial herb of the Labiateae (mint) family native to the Sierra Mazateca region of Oaxaca, Mexico. ²⁻⁴ Its main constituents have been identified as the neoclerodane diterpenes Salvinorin A and B ^{5,6} while trace elements of several other diterpenes have also been detected. ⁶ The plant has been used in healing ceremonies by the Mazatec Indians of Oaxaca for centuries and for the

treatment of such conditions as anaemia, headache, and rheumatism.⁷ The psychoactive effects of the main ingredient Salvinorin A in humans were uncovered recently and it has enjoyed some popularity since that time as a legal, short-acting psychedelic, though its psychoactivity varies considerably depending on dosage and method of ingestion.⁸

This unique case may be of interest to the psychiatric and psychopharmacological communities in demonstrating the possible therapeutic effects of the unique active components of *salvia divinorum* in a case of treatment-resistant depression. While the typical dose used by this patient in maintenance management of her depression, consisting of 2-3 leaves, is well below that reported to cause significant intoxication when taken orally,⁸ one cannot discount the possibility that some of the benefits derived from *salvia divinorum* were due to the psychedelic qualities associated with the larger doses of this herb used occasionally by this patient.

While a discussion of these effects is outside the scope of this paper, the value of psychedelic compounds as research tools and their beneficial effects in the amelioration of symptoms of psychiatric conditions is well established.⁹⁻¹¹ Given that the mechanisms of action of the constituents of *salvia divinorum* remain unknown and the spectrum of psychedelic effects of this herb appears to be unique,⁸ it is not inconceivable that research using the active ingredients from this herb may pinpoint a unique mechanism of antidepressant action for these compounds. This, in turn, could lead to methods for the management of depression or of treatment-resistant subtypes of this condition. This possibility is further enhanced by the recent finding using the screening procedure called Novascreen that Salvinorin A did not show significant inhibition of reference target compounds on any of the 42 known bioreceptors tested.⁸ We may be dealing with a highly novel agent that has significant research and therapeutic potential in fields such as psychopharmacology, psychiatry and complementary disciplines such as herbal medicine.

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