Herbal Medicine in the Treatment of Obsessive Compulsive Disorder: A Review

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Received: 23 Oct. 2018 **Accepted:** 18 Dec. 2018 doi: 10.29252/jmp.3.71.1

Abstract

Obsessive compulsive disorder (OCD) is a severe and debilitating neuropsychiatric condition that is characterized by recurrent and intrusive thought that the affected individual feels compelled to perform in order to reduce the distress. It affects between 1 to 3% of the general population around the world and has some gender-related features. Although selective serotonin reuptake inhibitors, tricyclic antidepressants and cognitive-behavioral therapy are the first line medication and treatment of OCD, an estimated 30% of patients are treatment-resistant and complete functional recovery is rare. Therefore, several researches and trials have been done to develop new pharmacotherapeutic agents or modulate different neurotransmitters for treatment of OCD. In this concept alternative medicine and particular herbal medicine are very interesting in this issue. We focus on some herbal medicine in the treatment of OCD in this review.

Keywords: **Alternative Medicine, Herbal Medicine, Obsessive compulsive disorder**

Introduction

Although what causes obsessive-compulsive disorder (OCD) is not fully known, three theories have been developed. OCD may have a biological basis and be the result of changes in a person's higher cognitive functions brought about by neurochemical imbalances. Specific genes responsible for OCD have not been identified. The second theory is that OCD may be caused by environmental factors and be born of behavior-related habits a person has been learning over time [1, 2]. The third theory blames OCD on insufficient serotonin levels. Serotonin is a neurotransmitter; it is one of the brain's chemical messengers. Medications that work by improving serotonin action reduce OCD, which lends much credence to this theory [3].

Many people have focused thoughts or repeated behaviors. But these do not disrupt daily life and may add structure or make tasks easier. For people with OCD, thoughts are persistent and unwanted routines and behaviors are rigid and not doing them causes great distress. Many people with OCD know or suspect their obsessions are not true; others may think they could be true (known as poor insight). Even if they know their obsessions are not true, people with OCD have a hard time keeping their focus off the obsessions or stopping the compulsive actions [4, 5].

A diagnosis of OCD requires the presence of obsession and/or compulsions that are time-consuming (more than one hour a day), cause major distress, and impair work, social or other important function. About 1.2 percent of Americans have OCD and among adults slightly more women than man are affected. OCD often begins in childhood, adolescence or early adulthood; the average age symptoms appear is 19 years old [4-6].

Although OCD is a serious mental illness associated with high levels of disability, there are a number of OCD treatments that will significantly reduce OCD symptoms in two-thirds of affected people. For the remaining one-third of people not helped by standard OCD treatments, a number of alternative and experimental OCD treatments offer new hope [7].

Obsessive-Compulsive Disorder (OCD) is an anxiety disorder characterized by intrusive thoughts causing discomfort, apprehension or repetitive behaviors aimed at reducing the associated anxiety. First line pharmacotherapy for OCD includes Serotonin Reuptake Inhibitors (SRIs) and tricyclic antidepressants, most notably, clomipramine. Unfortunately, the outcome of first-line pharmacotherapy is not satisfactory in up to 30% of patients. The exact etiopathogenesis of serotonergic dysfunction in OCD is still a matter of controversy, and there might be different underlying mechanisms responsible for the overall clinical heterogeneity observed in OCD [8, 9].

Obsessive-Compulsive disorder (OCD) affects between 1 to 3% of the world population. The disease causes impairment in social and occupational function of the patients. The standard treatment for OCD is comprised of a selective serotonin inhibitor and clomipramine. After standard pharmacologic therapy, about 30 to 60% of patients exhibit only a partial response with the remaining symptoms continuing to impair their function. This warrants a search for new

strategies to modulate different neurotransmitters for treatment of OCD. The cortico-striato-thalamo-cortical (CSTC) circuitry has been implicated in OCD, and glutamate hyperactivity in the circuit has been proposed to have a key role in pathogenesis of the disease. Both disruption in glutamate neurotransmission and hyperactivity of glutamate is reported in OCD patients. Evidence supports the effectiveness of different adjuvant therapies, such as antipsychotic agents and glutamate modulating agents, (e.g. memantine) in treatment of refractory OCD. Other drugs with antiglutamatergic effect have also been evaluated in this regard: riluzole reduces the effect of glutamate in multiple brain regions and was found effective as an augmentation in treatment resistant OCD. N-acetylcysteine regulates glutamate exchange and was found to reduce the severity of OCD symptoms [10, 11]. Obsessive compulsive disorder (OCD) is routinely treated with serotonin reuptake inhibitors (SRI). Despite the widespread use of SRIs in treatment of OCD, these drugs generally reduce symptoms by only about 20-30%. Therefore, many patients have significant residual symptoms after beginning SRI use. Several psychotherapeutic and psychopharmacological options have been proposed to augment the effect of SRIs in treatment of OCD. Medications which are used to augment the effect of SRIs are generally developed based on the evidence of neurotransmitter changes in the brain of patients with OCD. In addition to serotonin, dopamine is thought to play a key role in the pathophysiology of OCD. Hence, among the most widely used augmentative medications are typical and atypical antipsychotics. Antipsychotic augmentation of SRIs, although effective in several cases, is associated with significant side effects. Therefore, development of other augmentative strategies which are associated with fewer side effects is of particular interest in the treatment of patients with OCD [12-14].

Milk Thistle (*Silybum marianum*)

Milk thistle is an herbal remedy that has long been used in Iran. In 2010, a double-blind, placebo-controlled study compared the effects of milk thistle to that of the antidepressant Prozac (fluoxetine) in treating OCD (600 milligrams of milk thistle vs 30 milligrams of Prozac daily). It was found that there was no significant difference between milk thistle and Prozac with respect to control of OCD symptoms [15, 16].

Borage Oil Decreases Anxiety in OCD Patients

Borage is a plant whose flower and oil are both used for OCD. It has anti-anxiety effects similar to benzodiazepines (ex. Valium) in mice models. A six-week trial was conducted on 44 patients who received either 500 mg daily of borage extract or placebo. At week four and six, the borage group and significantly reduced OCD symptoms and a decrease in anxiety. However, borage may cause liver toxicity, diarrhea, vomiting, headaches, worsening of asthma and may be harmful in pregnancy. It is not an optimal choice, especially in patients with liver damage or who are pregnant [15, 16].

St. John's Wort Helps OCD

The evidence that St. John's Wort is an effective treatment for OCD is limited. A case study using only one patient suggested that St. John's Wort was effective in reducing symptoms. A second, slightly larger study using 12 people with OCD found that St. John's Wort produced a significant reduction in symptoms that were similar to what would be expected with treatment with a selective serotonin reuptake inhibitors (SSRI) antidepressant medication. Neither study, however, properly accounted for the placebo effect. In both cases, the people participating in the research studies were told up front that they were going to be receiving St. John's Wort in the hopes of reducing their OCD symptoms. Simply knowing that they were receiving a potentially beneficial treatment could have been enough to cause people to feel better [15, 16].

***Crocus sativus* may be effective in the treatment of OCD**

A recent animal study has been reported that active constituents of saffron, crocins might play a role in compulsive behavior and support a functional interaction between crocins and the serotonergic system. A recent clinical trial by Esalatmaneh et al reported that saffron with daily dose of 30 mg saffron is effective in treatment of mild to moderate obsessive compulsive disorder. In addition, our study showed that saffron does not have any serious adverse effect in therapeutic doses. This 10-week double blind randomized trial showed that saffron was both safe and effective in treatment of mild to moderate depression [17].

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