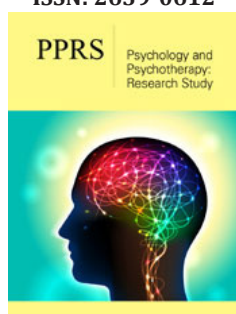


Application Progress of Traditional Chinese Medicine Therapy in the Treatment of Depression

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Abstract

In recent years, the role of traditional medical replacement therapy in the treatment of depression has gradually entered the public view. Relevant reports on the treatment of depression with traditional Chinese medicine involve that traditional Chinese medicine prescription therapy, acupuncture and moxibustion or monomer have good clinical efficacy, which is worthy of attention.

Keywords: Depression; Traditional chinese medicine; Acupuncture and moxibustion; Monomer

Introduction

Depression is a mental disease characterized by persistent sadness, loss of interest, insomnia, abnormal diet and even suicidal tendencies. Due to its high mortality and disability rate, it was listed as the third largest burden disease by the World Health Organization in 2008 and predicted to become the first in 2030 [1]. Because the pathogenesis of depression is complex and the disease is generally heterogeneous, the therapeutic effect of various types of targeted antidepressants is not ideal [2]. Therefore, it is urgent to find effective treatment methods and reduce adverse events. Complementary and alternative drug therapies, especially Traditional Chinese Medicine (TCM), have gradually entered the public's view of the therapeutic role in depression [3]. In this review, we mainly discussed the research progress in the treatment of depression with traditional Chinese medicine prescription, acupuncture and natural drug monomer.

Traditional Chinese medicine prescription in treating depression

Traditional Chinese medicine compound is composed of two or more traditional Chinese medicine, with relatively prescribed processing methods and use methods. The dosage form involves decoction, pill, powder, etc. Traditional Chinese medicine classifies depression patients into six subtypes according to their clinical symptoms and signs, and the Liver Qi Stagnation (LQS) and Heart Spleen Deficiency (HSD) subtypes are the most common [4,5]. The mechanism of Xiaoyao San in treating LQS subtype depression is related to monoamine neurotransmitters, neural plasticity, synaptic plasticity, inflammatory response, neuroprotection, oxidative stress and autophagy to reduce neuronal apoptosis [6]. The mechanism of Guipi Decoction in the treatment of HSD subtype depression involves promoting the proliferation, differentiation and neurogenesis of neurons in the dentate gyrus of the hippocampus [7].

Acupuncture and moxibustion in treating depression

The treatment of depression by acupuncture and moxibustion was recorded in the ancient book of Chinese medicine, *Lingshu* (written in 770 BC). Modern research has confirmed that acupuncture and moxibustion therapy has good clinical efficacy in the treatment of depression and is accompanied by a minimal probability of adverse events [8]. Acupuncture and moxibustion treatment of depression mainly includes MA (Manual Operation), EA (Electroacupuncture) and LA (Non-Penetrating Acupuncture), all of which can increase the brain activity of the middle temporal gyrus and caudate nucleus through acupoint stimulation

and reshape the microstructure of the white matter fiber bundle in the brain area to reduce the depression scale score of patients [9]. Acupuncture and moxibustion can regulate neurotransmitters, neuroinflammatory cytokines, hypothalamus-pituitary-adrenal axis and hypothalamus-pituitary-gonadal axis to treat depression [10]. The mechanism involves the activation of MAPK/ERK, p-p38MAPK and AC-cAMP-PKA-CREB signaling pathways [11-13].

Monomer of traditional Chinese medicine in treating depression

Extracting bioactive compounds from natural Chinese herbal medicine plants is a new idea for the development of antidepressant drugs. A large number of active ingredients of Chinese herbal medicine have been proved to have good antidepressant effects. Paeoniflorin is a monoterpene compound extracted from the root of *Paeonia lactiflora*, which has extensive anti-inflammatory, analgesic and immunomodulatory effects. Modern research found that paeoniflorin can improve IFN- α induced depressive behavior in mice by reversing amygdala neuroinflammation [14]. At the same time, paeoniflorin has been reported to improve depression by regulating cellular inflammation and synaptic function, and the mechanism involves ERK1/2, p38MAPK/NF- κ B approach [15,16]. Saikosaponin A (SA) is the main bioactive component extracted from *Bupleurum* Chinese, which has anti-malignant cell proliferation, anti-inflammatory, antioxidant and liver protection effects. The study found that SA may play an antidepressant role by up-regulating the expression level of PRRT2 and increasing the DA content of hippocampus [17]. These monomers are antidepressant potential molecules screened and discovered based on the theory of traditional Chinese medicine.

Conclusion and Further Questions

The efficacy of traditional Chinese medicine in treating depression is accurate, but there are many bottlenecks in the current research. It is difficult to achieve precise target research on the efficacy mechanism of traditional Chinese medicine compound because of its complex components. The relationship between the biological effects of human acupoint stimulation and acupuncture methodology needs further exploration. Although the study of antidepressant mechanism of Chinese herbal monomer is clearer than the former two, there are also problems such as bioavailability, macromolecules cannot pass through the blood-brain barrier, and it is difficult to achieve clinical use. If we can pay more attention to the treatment of depression with traditional medicine in the future, combining multi-dimensional research will undoubtedly broaden our thinking for the treatment of depression.

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