

Research progress of acupuncture in the treatment of depression in adolescents

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Abstract: In recent years, the incidence of depression has tended to be increasingly younger. The incidence of depression in adolescents is increasing year by year, and depression has become one of the most serious psychological disorders affecting the physical and mental health of adolescents nowadays. In this paper, by investigating and studying the research progress of acupuncture for adolescent depression, we compare and analyze the characteristics of TCM treatment for adolescent depressed patients by combining the theoretical knowledge of TCM from simple acupuncture for adolescent depression, acupuncture combined with psychotherapy for adolescent depression, and acupuncture combined with drugs for adolescent depression and other comprehensive therapies, and at the same time, carry out In-depth analysis was conducted to clarify effective treatment options and to provide an important theoretical basis for further development and treatment of this disease.

Keywords: acupuncture, adolescent depression, review

Adolescent depression is a psychological disorder that occurs during adolescence. It has a high prevalence worldwide and not only increases the risk of suicide in adolescents (suicide has also become the second leading cause of death in adolescents), but also greatly contributes to their risk of depression and substance abuse in adulthood^[1]. In recent years, the incidence of depression in adolescents has shown a trend of increasing year by year, and the strong suicidal ideation is extremely likely to induce self-injurious and suicidal behaviors in adolescent patients. Nowadays, depression, as one of the most serious psychological disorders in adolescents, seriously affects the physical and mental health of adolescents^[2]. Depression is one of the most popular diseases treated with acupuncture, and compared with the treatment of depression with drugs or psychotherapy, acupuncture treatment has fewer side effects and is less costly^[3]. Nowadays, research on acupuncture treatment of depression has been advancing, and the research progress of acupuncture treatment of depression in adolescents in the past five years is reviewed in this paper.

1. Treatment of depression in adolescents by acupuncture - "Shaoyang is the pivot" theory

The theory of "Shaoyang as the pivot" was first proposed in the Nei Jing - "The Sun is the opening, Yangming is the closing, and Shaoyang is the pivot." . The original meaning of "pivot" is "pivot" which is used as a metaphor for the key part of the movement of things, and in meridian theory it is a metaphor for the key to the opening and closing movement of the meridians. "Shaoyang main pivot" is not only the main "pivot of surface and interior", but also refers to the "pivot of yin and yang". So also regulate the release and convergence of the human yang. If Shaoyang open and close the pivot is not good, it will make the other five meridians of yin and yang Qi out of balance, people are an organic whole, yin and yang out of balance, and then the six meridians of yang Qi rise and yin and yang Qi harmonization will also be affected.

In addition, "Shaoyang" is the pivotal point of the gradual development of Yang energy, and although adolescents are at the time of the rise of Shaoyang energy, Shaoyang energy is not full, so they are more susceptible to external evil and internal injury, which can lead to diseases. In addition, nowadays, with the advent of the big data era, more and more adolescents are addicted to the Internet, which seriously affects their sleep quality [4-5], but the Ziqi (23:00 to 1:00) is when Shaoyang is in charge, and because of its long-term addiction to the Internet, it cannot sleep on time, so the opening and closing of the pivot

of Yang Qi cannot function normally, which makes the pivot of Shaoyang lose its operation, the meridian Qi is unfavorable, and the Qi is depressed, so it develops into a depression. The "Treatise on Typhoid" also mentions about the Shaoyang evidence: "cold and fever, bitter fullness in the chest, silent desire not to eat and drink, disturbed heart and vomiting" and other symptoms of unfavorable Shaoyang pivot are also reflected in depression, the essence of which is the inability of Shaoyang to open and close the pivot and the depression of Qi. Therefore, at the time when the qi of Shaoyang is rising and developing in adolescents, it is more likely to have unfavorable Shaoyang pivot and stagnant qi, which leads to emotional and mental pathologies and develops into depression.

The Shaoyang pivot is crucial to the regulation of qi, so Yu Yunjin et al [6] believed that the treatment of adolescent depression should start from Shaoyang, by regulating Shaoyang meridian qi, regulating the rise and fall of qi, and then operating the pivot, so as to achieve the purpose of antidepressant. Therefore, it is believed that Fengchi of the foot Taiyang Gallbladder meridian, Fengfu of the Governor's vein, Tianzhu of the foot Solar Bladder meridian, Wanbone of the foot Shaoyang Gallbladder meridian, cataract of the hand-foot Shaoyang meridian, and Tianji of the hand-Shaoyang meridian can be used together to open the pivot of Shaoyang and channel Shaoyang meridian qi, so as to help the growth and promotion of Yang qi, soothe the qi flow, and regulate the mood.

2. Treatment of adolescent depression by combining psychotherapy with acupuncture-"Tune the Governor's Brain Acupuncture"

According to Ling Shu - Hai Lun [7-8], the onset of depression is closely related to the brain and heart. According to Zhao Ya et al [9], there is a saying in Chinese medicine that "the brain is the master of the mind", and insomnia, depression and other emotional activities are also closely related to the brain. In addition, Li Ji et al [10], in their study of acupuncture points for depression, mentioned the role of the Governor's acupuncture points (Baihui, Yin Tang, etc.) in nervating the heart and opening the orifices, relieving depression and calming the mind. In a clinical study of adolescent depression by Dong Yan et al [11], the treatment group was treated with psychotherapy (supportive, comforting, cognitive or psychodynamic treatment) while choosing the acupuncture method of regulating the Governor's brain with the main points: Baihui, Shenting, Mute Gate, Liver Yu, Heart Yu, Spleen Yu, Kidney Yu, Taichong, Shenmen, Neiguan, and Tanzhong, which was significantly better than the treatment of taking Trigonelline hydrochloride tablets combined with psychotherapy in comparison to the The treatment group was significantly better than the control group. Finally, it was concluded that the combination of psychotherapy with the "Tui Du Tong Brain Acupuncture" was satisfactory for adolescent depression. In addition, Ai Xia et al [19] also showed the efficacy of acupuncture combined with psychotherapy on adolescent depression in 32 cases of adolescent depression treated with acupuncture combined with psychological intervention.

3. Treatment of adolescent depression with acupuncture combined with drugs

3.1 Treatment of adolescent depression with acupuncture combined with Chinese medicine

3.1.1 Combination of acupuncture with Chai Hu, Gui Zhi and Gan Jiang Tang for the treatment of depression in adolescents with liver qi stagnation

Su Wen - Ling Lan Secret Discourse: "The liver is the official of the general, and it is the source of all thoughts and ideas." In addition, the liver not only drains, but also collects blood. The drainage of human qi, the distribution of blood and fluids, metabolism and the regulation of emotions are all inseparable from the drainage function of the liver. If the liver is not drained, liver qi is stagnant, and qi and blood are not in harmony, it will lead to depression. In the Jin Kui Yao, it is stated that "when we see the disease of the liver, we know that the liver transmits the spleen, so we should first strengthen the spleen." Patients with prolonged liver qi stagnation must have reduced spleen and stomach functions, and at the same time, most adolescents crave cold and cold drinks, which are harmful to spleen and stomach functions. Therefore, most adolescents with liver qi stagnation also have spleen and stomach cold deficiency.

Therefore, in the clinical study of Qi Jianhua et al [12], in the treatment of adolescent depression, the treatment of patients with liver qi stagnation not only took into account the draining of liver qi, but also took into account the function of the spleen and stomach. Therefore, in the clinical study, in addition to the acupuncture points of Baihui, Neiguan, Sishencong, Shenmen, Hegu, Taichong, and Sanyinjiao,

which were used to regulate liver qi, Chai Hu, Gui Zhi, and Gan Jiang Tang were also used to harmonize the liver, gallbladder, spleen, and stomach. In the comparison with the oral use of fluoxetine hydrochloride dispersible tablets alone, it was concluded that acupuncture therapy combined with Chai Hu Gui Zhi Gan Jiang Tang had significant efficacy in treating adolescent depression patients with liver qi stagnation.

3.1.2 Treatment of adolescent depression by acupuncture combined with Chai Hu plus Long Bone Oyster Soup

In the Treatise on Typhoid Fever, it is stated that "for those who have had typhoid fever for eight or nine days, under which the chest is full of annoyance and alarm, urination is unfavorable, delirium is present, and the whole body is all heavy and cannot be turned, Chai Hu plus Dragon Bone and Oyster Soup is the mainstay." The main target is Shaoyang disease, which is manifested by the patient, mainly by alteration of the mind, and the evidence of Shaoyang pivotal organ being unfavorable and Shaoyang heat entering the blood component and disturbing the mind [13]. It is the majority of modern scholars [14-16] who have chosen this formula for antidepressant studies.

In a study by Liu Jing et al [17] on the effect of acupuncture combined with Chai Hu plus Gui Zhi Long Bone Oyster Tang in the treatment of adolescent depression and patients' uric acid, in addition to the selection of the main formula (Chai Hu plus Long Bone Oyster Tang) and the main acupuncture points (Baihui, Tai Chong, Neiguan, Si Shen Cong, Shen Men), different prescription medications and acupuncture points were added, subtracted and dispensed according to the patient's specific symptoms into different types of evidence such as liver qi stagnation, qi stagnation turning into fire, phlegm qi stagnation, loss of nourishment of heart and mind, and heart-kidney yin deficiency, which were superior to oral fluoxetine hydrochloride dispersible tablets in terms of clinical symptoms in adolescent depression patients and could effectively reduce patients' serum uric acid levels.

3.2 Combination of acupuncture therapy and western medicine in the treatment of depression in adolescents

Western medicine based treatment options for depression also affect its clinical application due to many factors such as many side effects, drug dependence, and poor compliance, so Kou Locktang [18] addressed the shortcomings of its western medicine by treating adolescent depressed patients with western medicine alone and western medicine combined with acupuncture for adolescent depression in a comparative study, and found that acupuncture was effective for patients with depression treated with western medicine who experienced side effects not associated with the intended treatment. The study found that acupuncture was effective in alleviating the toxic side effects associated with the intended treatment. The efficacy of acupuncture in reducing the dose of medication application and long-term control in adolescent depression patients was concluded to be stable.

4. Summary

Adolescents are prone to negative perceptions and radical thoughts due to the "psychological weaning" phase, the increased pressure of learning, the failure to establish a sense of self identity, and the lack of discernment and judgment [1]. For the treatment of adolescent depression, whether it is the choice of acupuncture treatment based on the theory of "Shaoyang as the pivot" in adolescence, or the intervention of acupuncture and psychotherapy, or the combination of acupuncture and drugs, all have achieved better results, reflecting the advantages of acupuncture treatment of depression, and providing more reference basis for the clinical treatment of adolescent depression. In addition, acupuncture treatment of adolescent depression can also have a better target on the side effects caused by western medicine treatment, and compared with the treatment of western medicine alone, these acupuncture integrated therapies not only enrich the treatment of depression in Chinese medicine, but also improve the efficacy or shorten the course of the disease, reduce the adverse effects, improve the patient's compliance with the treatment, and thus reduce the cost, which has achieved good results [9]. However, at present, the mechanism of action of acupuncture has not been fully elucidated, and the references are small samples, and the data are not representative of the overall level. The clinical treatment research on acupuncture for adolescent depression needs to be further developed.

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