Exploration of the Combined Application Model and Enhancement Mechanism of Multiple Therapies Based on the Types of Depressive Disorders

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Abstract: Depression, as a common mental disorder, seriously affects the quality of life and physical and mental health of patients. Due to the diversity of depressive disorders, a single therapy often fails to achieve the desired therapeutic effect. This article aims to explore the combined application model of multiple therapies based on the types of depressive disorders and its enhancement mechanism. Firstly, analyze the characteristics of different types of depressive disorders. Then, elaborate the theoretical basis and practical model of the combined application of multiple therapies. Finally, deeply explore its efficacy enhancement mechanisms, including neurobiological mechanisms, psychological mechanisms and social mechanisms, etc., in order to provide new ideas and methods for the clinical treatment of depression.

Keywords: Types of Depressive Disorders; Combined Application of Multiple Therapies; Efficiency Enhancement Mechanism

1. Introduction

Depression is a mental disorder characterized mainly by a significant and persistent low mood, often accompanied by symptoms such as reduced interest, anhedonia, self-blame and self-guilt, sleep disorders, and changes in appetite [1]. Depression not only brings great pain to patients, but also imposes a heavy burden on society and families. At present, the treatment methods for depression mainly include drug therapy, psychotherapy and physical therapy, etc. However, single therapy has certain limitations in clinical application. Patients with different types of depressive disorders have differences in etiology, symptom manifestations and biological characteristics. Therefore, choosing an appropriate multi-therapy combined application model based on the type of depressive disorder and exploring its efficacy enhancement mechanism are of great significance for improving the therapeutic effect of depression [2].

2. Types and Characteristics of Depressive Disorders

2.1 Endogenous Depression

Endogenous depression is mainly caused by biological factors and is closely related to genetics, neurotransmitter imbalance, neuroendocrine disorders, etc. [3] Patients usually present with core symptoms such as low mood, loss of interest and reduced energy, and the symptoms are relatively severe with a long course of the disease. Such patients often respond well to drug treatment, but drug treatment alone may be difficult to completely relieve the symptoms, often accompanied by cognitive impairment and decline in social function.

2.2 Psychogenic Depression

Psychogenic depression is mainly triggered by psychosocial factors, such as major life events, long-term stress, interpersonal relationship problems, etc. [4] The patient's symptoms are closely related to psychological stress and are often accompanied by symptoms such as anxiety, insomnia and physical discomfort. Psychotherapy plays a significant role for patients with psychogenic depression. By adjusting their cognitive and behavioral patterns, it helps relieve psychological stress and improve their emotional state.

2.3 Seasonal Depression

Seasonal depression has distinct seasonal onset characteristics, usually occurring in autumn and winter and alleviating in spring and summer [5].

Its pathogenesis is related to factors such as insufficient light exposure and abnormal secretion of melatonin. The patient mainly presents symptoms such as low mood, drowsiness, increased appetite and weight gain. Light therapy is one of the common treatment methods for seasonal depression, but combining it with other therapies may achieve better results.

2.4 Postpartum Depression

Postpartum depression refers to the depressive symptoms that occur in new mothers after giving birth. Its onset is related to various factors such as physiological changes, psychological stress, and family relationships [6]. Patients often present with symptoms such as low mood, anxiety, self-blame, and lack of interest in the baby, which seriously affect the mother-infant relationship and the physical and mental health of the parturient. The treatment of postpartum depression requires a comprehensive consideration of factors such as drug therapy, psychotherapy and family support.

3. Theoretical Basis for the Combined Application of Multiple Therapies

3.1 The Multifactorial Pathogenic Theory of Depression

The occurrence of depression is the result of the combined effect of biological factors, psychological factors and social factors. Biological factors include genetics, neurotransmitter imbalance, neuroendocrine disorders, etc. Psychological factors include cognitive biases, poor coping styles, etc. Social factors include life events, insufficient social support, etc. [7] Single therapy often only targets a certain factor for treatment, while the combined application of multiple therapies can intervene in the pathogenesis of depression from multiple perspectives and improve the therapeutic effect.

3.2 Complementarity of Different Therapies

Different therapies such as drug therapy, psychotherapy and physical therapy have their own advantages and limitations [8]. Drug treatment can relieve symptoms quickly, but it may have side effects and a risk of recurrence. Psychotherapy can adjust the psychological state and behavioral patterns of patients, but it takes effect relatively slowly. Physical therapies such as electroconvulsive therapy and repetitive transcranial magnetic stimulation have good therapeutic effects on some patients with refractory depression. The combined application of multiple therapies can give full play to the advantages of different therapies, achieve complementary advantages, and improve the comprehensive effect of treatment.

3.3 Individualized Treatment Principle

Patients with different types of depressive disorders have significant differences in terms of etiology, symptom manifestations and biological characteristics [9]. For example, endogenous depression is mainly caused by biological factors. Patients often present with core symptoms such as low mood, loss of interest, and reduced energy, and the symptoms are relatively severe with a long course of the disease. Psychogenic depression is mainly triggered by psychosocial factors. The symptoms of patients are closely related to psychological stress and are often accompanied by symptoms such as anxiety and insomnia. Therefore, individualized treatment plans need to be formulated based on the specific conditions of the patients. The combined application of multiple therapies can select the appropriate therapy combination based on the characteristics and needs of the patient's condition. For patients with mild symptoms and mainly psychosocial factors, psychotherapy can be the main approach, supplemented by appropriate drug therapy and physical therapy. For patients with severe symptoms and accompanied by biological abnormalities, drug treatment should be the basis, combined with psychotherapy and physical therapy. Through the combined application of individualized multiple therapies, precise treatment can be achieved, enhancing the pertinence and effectiveness of the treatment, and enabling patients to obtain better therapeutic outcomes.

4. A Multi-therapy Combined Application Model Based on the Type of Depressive Disorder

4.1 The Combined Application Model of Multiple Therapies for Endogenous Depression

Endogenous depression is mainly caused by biological factors, and drug therapy is its basic treatment method. Drugs such as selective serotonin reuptake inhibitors (SSris) and serotonin and norepinephrine reuptake inhibitors

(SNris) can effectively alleviate symptoms such as depression and loss of interest in patients by regulating the levels of neurotransmitters. However, although drug treatment alone can improve some symptoms, it has limited effects on the recovery of patients' cognitive and social functions.

Cognitive behavioral therapy (CBT) can work in synergy with drug treatment. CBT helps patients identify and change negative thinking patterns, adjust bad behavioral habits, and improve their cognitive functions and social coping styles. For instance, guide patients to learn to deal positively with stressful events in life and enhance their sense of self-efficacy. For patients with severe cognitive impairment, cognitive rehabilitation training can further promote the recovery of cognitive function. Cognitive rehabilitation training includes memory training, attention training, etc. Through targeted training programs, it enhances patients' cognitive abilities and enables them to better adapt to social life.

4.2 The Multi-therapy Combined Application Model of Psychogenic Depression

Psychogenic depression is mainly caused by psychosocial factors, and psychotherapy should be the main treatment approach. Interpersonal relationship therapy (IPT) focuses on improving patients' interpersonal relationships and helping them resolve psychological distress caused by interpersonal relationship issues, such as conflicts with family, friends or colleagues. Supportive psychotherapy provides patients with emotional support and understanding, enhancing their confidence in coping with difficulties.

For patients with severe symptoms, combined treatment with low-dose antidepressants can quickly relieve the symptoms and reduce the patients' suffering. Meanwhile, physical therapy methods such as relaxation training and music therapy can be used as auxiliary means. Relaxation exercises such as deep breathing and progressive muscle relaxation can relieve patients' anxiety and tension, and help them relax both physically and mentally. Music therapy regulates patients' emotional states and promotes psychological balance by listening to soothing music.

4.3 The Multi-therapy Combined Application Model for Seasonal Depression

Light therapy is the preferred treatment for seasonal depression. In autumn and winter, insufficient light can affect the secretion of melatonin, causing patients to feel depressed. Light therapy improves the emotional state of patients by increasing the duration of light exposure and regulating the secretion rhythm of melatonin. It is generally recommended that patients receive a certain intensity of light in the morning for a period of time.

On the basis of light therapy, the combination of SSRI drugs can enhance the therapeutic effect. SSRI drugs can regulate the levels of neurotransmitters and work in synergy with light therapy to better alleviate the depressive symptoms of patients. In addition, encouraging patients to engage in outdoor activities and increase their exposure to natural light can not only supplement light but also allow them to get in touch with nature, relax their mood, and help alleviate symptoms.

4.4 The Multi-therapy Combined Application Model for Postpartum Depression

The treatment of postpartum depression requires a comprehensive consideration of factors such as drug therapy, psychotherapy and family support. For patients with mild symptoms, psychological treatments such as family therapy and cognitive behavioral therapy can be adopted first to help them adjust their mindset and improve family relationships. For patients with severe symptoms, it is necessary to combine antidepressant drug treatment on the basis of psychological therapy. However, attention should be paid to the impact of the drugs on infants, and drugs with higher safety should be selected. Meanwhile, the support and care from family members are crucial for the recovery of patients with postpartum depression.

5. The Synergistic Mechanism of Combined Application of Multiple Therapies

5.1 Neurobiological Mechanisms

5.1.1 Neurotransmitter regulation

The regulatory effects of different therapies on neurotransmitters are synergistic. Drug therapy can directly act on the neurotransmitter system, increase the concentration of neurotransmitters in the synaptic cleft, and improve nerve conduction function. Psychotherapy can influence the secretion and metabolism of neurotransmitters by regulating patients' emotions and behaviors. For instance, cognitive behavioral therapy can reduce the stress level of

patients and decrease the secretion of stress hormones such as cortisol, thereby protecting the balance of the neurotransmitter system. Physical therapy, such as repetitive transcranial magnetic stimulation, can regulate the excitability of the cerebral cortex and affect the release of neurotransmitters. The combined application of multiple therapies can regulate the neurotransmitter system at multiple levels and enhance the therapeutic effect.

5.1.2 Changes in neural plasticity

The brains of patients with depression have neuroplasticity changes, such as neuronal atrophy and decreased synaptic plasticity. Therapies such as drug treatment and psychotherapy can promote the recovery of neural plasticity. Drug therapy can promote the growth and repair of neurons by regulating signaling pathways such as nerve growth factor. Psychotherapy can promote the formation and remodeling of synapses by providing new learning and experiences. The combined application of multiple therapies can accelerate the changes in neural plasticity and improve the adaptability and recovery ability of the brain.

5.1.3 Neuroendocrine regulation

The neuroendocrine system of patients with depression is disregulated, such as hyperfunction of the thalamic-pituitary-adrenal axis (HPA axis), etc. Drug therapy and psychotherapy can regulate the functions of the neuroendocrine system. Drug treatment can inhibit the excessive activation of the HPA axis and reduce cortisol levels. Psychotherapy can relieve the stress state of patients and regulate the balance of the neuroendocrine system. The combined application of multiple therapies can regulate the neuroendocrine system more effectively and improve the physiological state of patients.

5.2 Psychological Mechanism

Psychological treatments such as cognitive behavioral therapy can change patients' cognitive patterns and correct negative ways of thinking and beliefs. Drug treatment can alleviate the emotional symptoms of patients and make them more receptive to the intervention of psychological therapy. The combined application of multiple therapies can promote positive changes in patients' cognition and improve their self-awareness and coping ability.

The regulatory effects of different therapies on emotions complement each other. Drug treatment can quickly relieve patients' symptoms such as depression and anxiety, creating favorable conditions for psychological therapy. Psychotherapy can help patients learn effective emotional regulation strategies, such as emotional expression and emotional relaxation. Physical therapies such as music therapy can regulate patients' emotional states through the aesthetic stimulation of music. The combined application of multiple therapies can regulate patients' emotions from multiple perspectives and improve the stability of emotions.

Self-efficacy refers to an individual's subjective judgment on whether they can successfully complete a certain behavior. Patients with depression often have a lower sense of self-efficacy. Psychotherapy can enhance patients' self-efficacy by encouraging them to actively participate in therapeutic activities. Drug treatment can relieve symptoms and make patients feel that their abilities are recovering, thereby enhancing their sense of self-efficacy. The combined application of multiple therapies can more effectively enhance patients' self-efficacy and promote their recovery.

5.3 Social Mechanism

5.3.1 Enhanced social support

Family support, friend support and social support networks are crucial for the recovery of patients with depression. The combined application of multiple therapies usually requires patients to actively participate in the treatment process and communicate and interact with doctors, therapists and other patients, which helps to enhance patients' social support. Meanwhile, the education and guidance provided to the patient's family members during the treatment process can also enhance their support and understanding of the patient, creating a favorable social environment for the patient.

5.3.2 Recovery of social functions

Patients with depression often have a decline in social functions, such as reduced working ability and interpersonal relationship disorders. The combined application of multiple therapies can improve the social functions of patients by enhancing their symptoms and psychological states. Drug treatment can relieve symptoms and enable patients to have the energy to participate in social activities. Psychotherapy can help patients adjust their interpersonal relationships and improve their social skills. Physical therapy can improve the physical condition of patients

and provide a guarantee for their participation in social activities.

5.3.3 Optimization of rehabilitation environment

The combined application of multiple therapies usually needs to be carried out in professional medical institutions or rehabilitation centers, which can provide patients with a good rehabilitation environment. Meanwhile, the implementation of community rehabilitation services can also provide continuous support and assistance to patients, promoting their recovery and reintegration into society.

6. Precautions in Clinical Practice

In the clinical practice of the combined application of multiple therapies for depression, to ensure the therapeutic effect and guarantee the safety of patients, multiple key points need to be comprehensively paid attention to.

First of all, the selection and combination of therapies are of vital importance. Different types of depressive disorders have unique pathogenesis and symptom manifestations, which requires doctors to make precise judgments based on the specific conditions of patients. For example, endogenous depression is often related to biological factors, and drug treatment is often used as the basis. On this basis, cognitive behavioral therapy can be combined to improve cognitive function. Psychogenic depression, on the other hand, is mainly treated with psychotherapy, supplemented by low-dose medication when necessary. The severity of the disease is also an important basis for choosing a therapy. For patients with mild symptoms, a single therapy may achieve good results. However, for patients with more severe symptoms, the combined application of multiple therapies may be more appropriate. At the same time, individual differences cannot be ignored. The patient's age, gender, physical condition, past medical history, etc. will all affect the selection and combination of therapies. When choosing a combination of therapies, the interactions and synergies among different therapies should be fully considered. Some therapies may have a synergistic effect, which can enhance the therapeutic effect. However, there may be conflicts or adverse reactions among some therapies. For instance, certain medications and psychotherapy methods may be incompatible in terms of implementation time or approach. This requires doctors to carefully plan and adjust to avoid adverse effects between therapies.

Secondly, the sequence and timing of treatment need to be precisely grasped. The onset time and course of treatment vary among different therapies. For patients with severe symptoms, drug treatment often can quickly relieve symptoms and reduce patients' suffering, so it can be given priority. After the patient's symptoms have improved, psychological therapy can be combined to help the patient fundamentally adjust their psychological state and behavioral patterns and consolidate the treatment effect. For some patients with chronic depression, as their condition is rather stubborn and requires long-term treatment, a combination of psychotherapy and medication can be adopted at this time to continuously exert its effect and prevent the recurrence of the disease. In addition, the timing of treatment is also related to factors such as the patient's psychological state and life events. For instance, after a patient has experienced a major life event, psychotherapy may need to be intervened promptly to help the patient cope with psychological trauma.

Furthermore, the compliance of patients is a key factor affecting the therapeutic effect. The treatment of depression usually takes a long time, and patients may interrupt the treatment for various reasons. Therefore, during the treatment process, doctors should enhance their education and communication with patients. Introduce in detail to patients the causes, treatment methods, treatment cycle and expected effects of depression, etc., to enhance patients' awareness and understanding of the treatment. Meanwhile, give patients sufficient care and support to enhance their confidence and compliance in treatment. In addition, close attention should be paid to the treatment response and adverse reactions of the patients. If the patient experiences adverse reactions or the treatment effect is unsatisfactory, the treatment plan should be adjusted in a timely manner to prevent the patient from giving up the treatment due to discomfort during the treatment process.

Finally, safety assessment is an indispensable link in the process of combined application of multiple therapies. The combined application of multiple therapies may increase the risk of adverse reactions. For instance, the interaction between drugs may lead to an aggravation of adverse reactions, and patients may experience mood swings during psychotherapy. Therefore, during the treatment process, the patient's vital

signs, blood routine, liver and kidney functions and other indicators should be monitored regularly to detect and handle adverse reactions in a timely manner. Once adverse reactions are detected in the patient, corresponding measures should be taken immediately, such as adjusting the dosage of the drug, changing the drug or suspending the treatment, to ensure the patient's safety.

7. Conclusion

The combined application model of multiple therapies based on the types of depressive disorders is an effective way to improve the therapeutic effect of depression. Different types of depressive disorders have their own characteristics. The combined application of multiple therapies can formulate individualized treatment plans based on the specific conditions of patients, give full play to the advantages of different therapies, and achieve complementary advantages. Its enhancement mechanism involves multiple levels such as neurobiology, psychology and society. It improves the therapeutic effect of depression through pathways such as regulating the neurotransmitter system, promoting changes in neural plasticity, regulating the neuroendocrine system, altering cognition and emotion, enhancing social support and restoring social functions. In clinical practice, attention should be paid to issues such as the selection and combination of therapies, the sequence and timing of treatment, patients' compliance and safety assessment, to ensure the safety and effectiveness of treatment. Future research should further explore in depth the optimal model and efficacy enhancement mechanism of the combined application of multiple therapies, providing a more scientific basis for the clinical treatment of depression.

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