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### AIMS AND SCOPE

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Retrospective Study

Clinical efficacy and safety of Guipi decoction combined with escitalopram oxalate tablets in patients with depression

Jia Yu, Feng-Quan Xu

Abstract

BACKGROUND
Depression is a widespread mental health condition that requires effective treatment. In the treatment of depression, traditional Chinese medicine (TCM) offers obvious advantages, fewer adverse reactions, and a lower recurrence rate.

AIM
To evaluate the clinical benefits of Guipi decoction combined with escitalopram oxalate tablets for individuals with depression.

METHODS
In total, 80 patients diagnosed as having depression were enrolled in the study and divided into either an experimental group or a control group. All of the patients were orally administered escitalopram oxalate tablets. Additionally, the experimental group received Jiajian Guipi decoction and reduced Governor vessel fumigation over 4 wk. TCM syndrome scores, Hamilton depression rating scale (HAM-D) scores, self-rating depression scale (SDS) scores, and Pittsburgh sleep quality index scores were measured for the two groups and compared before and after the treatment. The two groups were monitored for any adverse reactions.

RESULTS
After 4 wk of treatment, both groups exhibited a significant reduction in TCM syndrome scores compared with their pre-treatment scores \((P < 0.05)\). However, the experimental group exhibited significantly lower TCM syndrome scores than the control group \((P < 0.05)\). Similarly, the post-treatment SDS and HAM-D-24 scores were significantly lower in both groups than the pre-treatment scores \((P < 0.05)\), with the experimental group exhibiting lower scores than the control group \((P < 0.05)\). The total treatment efficiency was significantly better in the experi-
mental group (97.14%) than in the control group (77.78%) ($P < 0.05$). Furthermore, after 4 wk of treatment, the Pittsburgh sleep quality index scores for both groups were significantly lower than before the treatment ($P < 0.05$), with the experimental group exhibiting lower scores than the control group ($P < 0.05$). The incidence of adverse reactions was significantly lower in the experimental group than in the control group ($P < 0.05$).

**CONCLUSION**
The combination of Guipi decoction and escitalopram oxalate tablets was found to be an effective and safe treatment for depression. This combination could reduce TCM syndrome scores, improve depressive symptoms, and enhance sleep quality.

**Key Words:** Jiajian Guipi decoction; Escitalopram oxalate tablets; Depressive disorder; Sleep quality; Traditional Chinese medicine syndromes

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**Core Tip:** The combination of Guipi decoction and escitalopram oxalate tablets showed promising clinical benefits for individuals with depression. In this study involving 80 patients who were divided into either an experimental group or a control group, the experimental group receiving both treatments exhibited significantly lower Traditional Chinese medicine (TCM) syndrome scores compared to the control group. After treatment, both groups experienced notable reductions in self-rating depression scale and Hamilton depression rating scale scores, with the experimental group showing greater improvement. The total treatment efficiency was significantly better in the experimental group. Additionally, both groups demonstrated improved sleep quality based on Pittsburgh sleep quality index scores. The experimental group had a lower incidence of adverse reactions compared to the control group. These findings indicate that the combined therapy effectively reduced TCM syndrome scores, improved depressive symptoms, and enhanced sleep quality in patients with depression. Thus, Guipi decoction combined with escitalopram oxalate tablets demonstrates potential as a safe and effective treatment option for depression, warranting further research and consideration in clinical practice.

**INTRODUCTION**
The incidence of depression, a mental illness, is very high in today's society. Depression is associated with high suicide and recurrence rates, mental disability, and so on, and thus, it has attracted people's attention considerably. The main physical symptom of depression is insomnia[1]. Severe insomnia can even mask depressive symptoms and become the main symptom. The pathogenesis of diseases, such as depression, is very complex, and clinical considerations may be related to the endocrine, immune, and nervous systems. Therefore, exploring effective treatment options for reducing adverse reactions and recurrence and improving the quality of life has always been a research hotspot[2]. Currently, antidepressants, sedatives, and hypnotic drugs are mainly used in Western medicine to treat patients with depression. Although these drugs may improve some symptoms, long-term use can lead to withdrawal-related concerns[3]. Escitalopram, a new drug, has a rapid effect and is widely used in the treatment of depression.

By contrast, in the treatment of depression, traditional Chinese medicine (TCM) offers obvious advantages, fewer adverse reactions, and a lower recurrence rate. In addition, external treatment offers the characteristics of convenience, economy, and fewer adverse reactions and is very apt for treating depression. Guipi decoction, including Fu Shen, Angelica, and fried Atractylodes rhizome, relieves liver depression. The combination of Chinese and Western medicine has recently been widely promoted[4,5]. Accordingly, the therapeutic effect of Guipi decoction plus reduced Governor vessel fumigation in combination with escitalopram oxalate tablets was investigated here.

**MATERIALS AND METHODS**

**General data**
From January 2022 to January 2023, 80 patients diagnosed as having depression and admitted to our hospital were selected for this study. The selection criteria were as follows: (1) Meeting the diagnostic standards for depression as per Western and Chinese medicine, as outlined in the American Diagnostic and Statistical Manual of Mental Disorders[6] and Chinese Internal Medicine[7]; (2) achieving a score of $\geq 18$ on both the Hamilton depression rating scale (HAM-D)[8] and Hamilton anxiety rating scale[9]; (3) experiencing mood depression with at least four of the nine depressive symptoms,
disease duration of > 14 d, and a decline in social functioning; (4) waking up early with a total sleep time of < 6 h; and (5) having maintenance insomnia, characterized by more than two instances of night awakening and a total awakening time of > 30 min.

The patients were excluded if they: (1) Had been treated with Guipi decoction combined with escitalopram oxalate tablets within 1 mo before study enrollment; (2) had major organ diseases such as heart and kidney conditions; (3) exhibited suicidal tendencies; (4) had abnormal electrocardiogram or laboratory test results; (5) had a history of epilepsy; (6) were diagnosed as having bipolar disorder; or (7) had organic and non-drug-induced depression.

Based on their treatment method, the patients were randomly assigned to either a control group (45 cases) or an experimental group (35 cases). The general data between the two groups exhibited no significant difference ($P > 0.05$) (Table 1).

**Diagnostic criteria of Western medicine for depression**

All study participants met the diagnostic criteria for depression as specified in the National Diagnostic and Statistical Manual of Mental Disorders. The typical symptoms presented by the patients were low mood, loss of interest, low energy, or fatigue. Other symptoms observed in these patients were inattention; low self-evaluation; self-guilt and unworthiness; thinking that the future is bleak; self-injury or suicide; sleep disorders; and lack of appetite. The course of the disease lasted for ≥ 2 wk.

**Diagnostic criteria of Chinese medicine for depression**

According to the 'TCM Internal Medicine', depression syndrome is categorized as a type of heart and spleen deficiency syndrome. The depressive symptoms as per these diagnostic criteria were excessive thinking, slow thinking, mental exhaustion, palpitation and timidity, amnesia, insomnia, loss of appetite, fatigue, pale face, pale tongue, thin white moss, and delicate and slow pulse.

**Therapies**

Both groups were administered escitalopram tablets (Sichuan Kelun Pharmaceutical Co., Ltd., National drug approval number H20080788, specification: 10 mg × 10 tablets) at an initial dose of 5 mg/d, which could be increased according to the condition, but not > 20 mg/d, and continued for 4 wk. Accordingly, Guipi decoction plus reduced Governor vessel fumigation treatment was then administered to the experimental group. The composition of the prescription was as follows: Fu Shen, Angelica, stir-fried Atractylodes rhizome, longan meat, Codonopsis, Astragalus, and stir-fried sour jujube seeds 15 g each; roasted licorice, wood fragrance, and Zhizhi 12 g each; and Wellixingan and garden balsam stem 10 g each. The decoction machine was used to prepare four bags of decoction (250 mL/bag). The decoction was poured into the middle hole of the fumigation bed. The temperature of the bed was 68 °C–70 °C. Steam was generated after boiling the decoction for 15 min. After the body temperature sensor displayed 40 °C, the patient’s back was exposed to the steam, with the patient lying flat on the bed. The back Governor vessel was aligned with the central depression of the bed. The back was exposed for 45 min/time, once daily, 5 times/wk, with 2 d of rest. The treatment was continued for 4 wk.

**Observational indexes**

The following scales or scoring systems were used to evaluate depression: (1) TCM syndrome score: Quantitative scores of the main symptoms before and after the treatment were determined according to the formulated standard. A score of 2 points was assigned when easy waking and dreaminess, palpitation and restlessness, forgetfulness, pale appearance, fatigue, and dizziness occurred occasionally, but did not affect life; 4 points when they occurred frequently and affected life to a certain extent; and 6 points when they had seriously affected life; (2) the HAM-D and self-rating depression scale (SDS) were used to assess the depressive state of the participants both before and after the treatment. An SDS score of below 50 indicated no depression, a score between 50 and 60 indicated mild depression, a score between 60 and 70 suggested moderate to severe depression, and a score above 70 was indicative of severe depression. Patients with a HAM-D-24 score < 8 were considered normal, 8–20 were likely depressed, > 20–35 had mild to moderate depression, and > 35 had severe depression; (3) efficacy criteria[10]: According to HAM-D evaluation, if the score reduction rate was < 25%, it was ineffective; if the rate was 25%–49%, it was effective; and if the rate was ≥ 50%, it was significantly effective. Effective rate = significantly effective + effective rate; (4) the Pittsburgh sleep quality index (PSQI) was used to evaluate various aspects of sleep quality, including duration, efficiency, disturbances, time taken to fall asleep, and daytime functionality. Each PSQI item was scored between 0 and 3, with a total possible score of 21 points. A lower PSQI score indicated better sleep quality; and (5) adverse reactions[11] were evaluated on the basis of the Treatment Emergent Symptom Scale (TESS) score (adverse reactions: headache, nausea, and fatigue). If the maximum TESS score of each item was ≥ 2 points, the reaction was considered an adverse reaction.

**Statistical analysis**

All data were analyzed using SPSS 22.0 software. Count data are presented as percentages and were compared by using the $\chi^2$ test, and normally distributed data are expressed as the mean ± SD. When the variance was equal, a $t$-test was used, whereas, when it was not, a corrected $t$-test was applied. $P < 0.05$ was considered to indicate a statistically significant difference.
### Table 1 Comparison of general data between the two groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Gender</th>
<th>Age</th>
<th>BMI (kg/m²)</th>
<th>Course of disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group (n = 45)</td>
<td>25/20</td>
<td>17.22 ± 5.13</td>
<td>24.22 ± 5.36</td>
<td>8.22 ± 1.23</td>
</tr>
<tr>
<td>Experimental group (n = 35)</td>
<td>19/16</td>
<td>17.26 ± 5.17</td>
<td>24.26 ± 5.14</td>
<td>8.29 ± 1.22</td>
</tr>
<tr>
<td>χ² / t value</td>
<td>0.010</td>
<td>0.034</td>
<td>0.038</td>
<td>0.253</td>
</tr>
<tr>
<td>P value</td>
<td>0.910</td>
<td>0.970</td>
<td>0.970</td>
<td>0.800</td>
</tr>
</tbody>
</table>

BMI: Body mass index.

### RESULTS

**Comparison of TCM syndrome scores**

After 4 wk of treatment, significant decreases in TCM syndrome scores were observed in both groups (P < 0.05). Notably, the experimental group's scores were substantially lower than those of the control group (Table 2).

**Comparison of SDS and HAM-D-24 scale scores**

Post-treatment scores on the SDS and HAM-D-24 scales were significantly lower than the pre-treatment scores (P < 0.05). The experimental group's scores were lower than those of the control group (Table 3).

**Comparison of clinical efficacy**

The total treatment efficiency of the experimental group was significantly better than that of the control group (P < 0.05; Table 4).

**Comparison of PSQI scores**

After 4 wk of treatment, both groups exhibited significantly lower PSQI scores than those before the treatment (P < 0.05). The experimental group's scores were lower than those of the control group (Table 5).

**Comparison of adverse reaction incidence**

The incidence of adverse reactions in the experimental group was significantly lower than that in the control group (P < 0.05; Table 6).

### DISCUSSION

Depression is a mood disorder that is commonly associated with high rates of morbidity and suicide. The incidence of depression is higher in females than in males. Depression results in other severe health problems. Patients with depression mainly exhibit persistent depression, low interest and activity, slow thinking, and impaired cognition. The recurrence rate of depression is also high[12]. Depression is expected to be the most significant disease burden in the future world, posing a severe threat to human health. Insomnia is a common symptom of depression. It is also a cause for the course of depression being prolonged[13]. The incidence of depression has recently been increasing. Long-term insomnia has severe, sometimes sudden, adverse effects on the physical and mental health of patients and can easily worsen the condition[14]. Although sedation and antidepressants have a rapid effect on patients with depression, most patients become dependent and drug-resistant. Hangovers developing with the use of these medicines affect the individual’s next day's work and life, which makes the treatment more complex[15]. Therefore, the combination of these drugs and TCM treatments holds significant clinical value in enhancing therapeutic efficacy.

According to TCM, depression belongs to the category of “depression syndrome” and is closely related to the liver. This disease is caused by depression, sadness, and rumination. A bad mood can easily induce liver qi stagnation. Qi stagnation causes the obstruction of qi and blood in the body, spleen, and liver, such as spleen insufficiency, affects the digestive system, and leads to a decreased appetite. In addition, liver depression can cause restlessness and other symptoms[16]. If adequate measures are not adopted in clinical practice on a timely basis, depressive symptoms of the patients may aggravate. In this fast-paced modern life, interpersonal relationships are more complex. Prolonged exposure to this modern life can easily cause liver qi stagnation and therefore induce mental disorders, which make it difficult for people to sleep at night[17]. As the disease course develops, spleen dysfunction, qi and blood disharmony, an unnourished mind, and deficiency of both the heart and spleen may be induced. Therefore, the syndrome of weakness of the heart and spleen is common evidence of depression, and appropriate treatment should be used in time to harmonize Yin and Yang and nourish the heart and spleen[18]. According to modern pharmacology, Codonopsis can protect and repair neurons and improve memory. Astragalus could inhibit hippocampal neuron apoptosis. Atractylodes enhances synaptic plasticity by upregulating the expression of the cAMP response element-binding protein, protein kinase C, and other proteins. Polygonatum and Suanjujube kernel exert hypnotic, sedative, antidepressive, and antianxiety effects and improve memory. Their action mechanism involves multiple targets, which induce specific curative effects on depression
Table 2 Comparison of traditional Chinese medicine syndrome scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Time</th>
<th>Easy waking and dreaminess</th>
<th>Palpitation</th>
<th>Forgetfulness</th>
<th>Pale face</th>
<th>Fatigue</th>
<th>Dizziness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>τ</td>
<td>t value</td>
<td>P value</td>
<td>t value</td>
<td>P value</td>
<td></td>
</tr>
<tr>
<td>Control group (n = 45)</td>
<td>Before treatment</td>
<td>5.08 ± 0.36</td>
<td>4.95 ± 0.22</td>
<td>4.63 ± 1.02</td>
<td>4.82 ± 1.02</td>
<td>4.40 ± 0.26</td>
<td>4.22 ± 0.29</td>
</tr>
<tr>
<td></td>
<td>After 4 wk of treatment</td>
<td>2.46 ± 1.02</td>
<td>1.98 ± 0.11</td>
<td>2.07 ± 0.11</td>
<td>2.96 ± 0.33</td>
<td>1.86 ± 0.22</td>
<td>2.08 ± 0.33</td>
</tr>
<tr>
<td>Experimental group (n = 35)</td>
<td>Before treatment</td>
<td>5.09 ± 0.22</td>
<td>4.96 ± 0.18</td>
<td>4.64 ± 1.03</td>
<td>4.83 ± 1.06</td>
<td>4.42 ± 0.32</td>
<td>4.23 ± 0.19</td>
</tr>
<tr>
<td></td>
<td>After 4 wk of treatment</td>
<td>1.22 ± 0.16&lt;sub&gt;a&lt;/sub&gt;</td>
<td>1.03 ± 0.12&lt;sub&gt;a&lt;/sub&gt;</td>
<td>1.32 ± 0.12&lt;sub&gt;a&lt;/sub&gt;</td>
<td>1.56 ± 0.15&lt;sub&gt;a&lt;/sub&gt;</td>
<td>0.92 ± 0.12&lt;sub&gt;a&lt;/sub&gt;</td>
<td>1.08 ± 0.11&lt;sub&gt;a&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>P < 0.05 vs control group.

Table 3 Comparison of self-rating depression scale and Hamilton depression rating-24 scale scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Time</th>
<th>SDS scale score</th>
<th>HAMD-24 scale score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>t value</td>
<td>P value</td>
</tr>
<tr>
<td>Control group (n = 45)</td>
<td>Before treatment</td>
<td>59.22 ± 5.23</td>
<td>20.22 ± 3.22</td>
</tr>
<tr>
<td></td>
<td>After 4 wk of treatment</td>
<td>50.19 ± 5.16</td>
<td>10.88 ± 1.22</td>
</tr>
<tr>
<td>Experimental group (n = 35)</td>
<td>Before treatment</td>
<td>60.19 ± 5.16</td>
<td>20.26 ± 3.17</td>
</tr>
<tr>
<td></td>
<td>After 4 wk of treatment</td>
<td>44.22 ± 5.03</td>
<td>6.95 ± 1.16</td>
</tr>
</tbody>
</table>

SDS: Self-rating depression scale; HAM-D: Hamilton depression rating scale.

Table 4 Comparison of clinical efficacy between the two groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Ineffective</th>
<th>Effective</th>
<th>Significantly effective</th>
<th>Effective rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group (n = 45)</td>
<td>10</td>
<td>17</td>
<td>18</td>
<td>35 (77.78)</td>
</tr>
<tr>
<td>Experimental group (n = 35)</td>
<td>1</td>
<td>14</td>
<td>20</td>
<td>34 (97.14)</td>
</tr>
</tbody>
</table>

χ² value 6.230

and other mental diseases[19-22]. Because oral decoctions are bitter, the action of Chinese patent medicine and simple preparations is slow. Moreover, some patients with depression, particularly those with severely declined activity, have poor compliance[23]. Fumigation therapy, relying on modern technology, has recently solved the aforementioned problems. Therefore, Guipi decoction plus reduced Governor vessel fumigation was used in this study. The Governor Yang meridian is one of the eight significant meridians. The various acupoints of the Governor vessel, Shen Dao, Sheng Men, Shen Zhu, and other acupoints have a good regulatory effect on sleep. The governor circulation runs in the spine, up to the brain, through the center of the navel, and up to the heart. The heart is the main god, and the brain is the house of the Yuan God, which is related to consciousness. Therefore, fumigation of the Governor vessel can enhance brain and heart functions, thereby improving sleep and consciousness[24]. The Jiajian Guipi decoction formula comprises Codonopsis, Astragalus, Angelica, fried Atractylodes rhizome, and spleen. The fumigation of the Governor vessel stimulates the whole body’s Yang meridian and warms the heart meridian. Fu Shen, longan meat, Zhizhi, and sour jujube kernel
Table 5 Comparison of Pittsburgh sleep quality index scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Time</th>
<th>Sleepy quality</th>
<th>Sleep latency</th>
<th>Duration of sleep</th>
<th>Sleep disorders</th>
<th>Sleep efficiency</th>
<th>Daytime function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group (n = 45)</td>
<td>Before treatment</td>
<td>2.66 ± 0.26</td>
<td>2.72 ± 0.26</td>
<td>2.88 ± 0.26</td>
<td>1.38 ± 0.21</td>
<td>2.94 ± 0.12</td>
<td>2.65 ± 0.15</td>
</tr>
<tr>
<td></td>
<td>After 4 wk of</td>
<td>1.66 ± 0.21</td>
<td>1.34 ± 0.26</td>
<td>1.89 ± 0.29</td>
<td>1.66 ± 0.21</td>
<td>1.83 ± 0.24</td>
<td>0.98 ± 0.12</td>
</tr>
<tr>
<td></td>
<td>treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t value</td>
<td></td>
<td>20.071</td>
<td>25.177</td>
<td>17.051</td>
<td>6.325</td>
<td>27.750</td>
<td>58.319</td>
</tr>
<tr>
<td>P value</td>
<td></td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Experimental group (n = 35)</td>
<td>Before treatment</td>
<td>2.67 ± 0.29</td>
<td>2.73 ± 0.24</td>
<td>2.89 ± 0.28</td>
<td>1.39 ± 0.22</td>
<td>2.95 ± 0.16</td>
<td>2.69 ± 0.14</td>
</tr>
<tr>
<td></td>
<td>After 4 wk of</td>
<td>1.06 ± 0.11*</td>
<td>0.71 ± 0.11*</td>
<td>1.42 ± 0.21*</td>
<td>1.02 ± 0.12*</td>
<td>1.12 ± 0.11*</td>
<td>0.22 ± 0.03*</td>
</tr>
<tr>
<td></td>
<td>treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t value</td>
<td></td>
<td>30.709</td>
<td>45.266</td>
<td>24.848</td>
<td>8.735</td>
<td>55.759</td>
<td>102.060</td>
</tr>
<tr>
<td>P value</td>
<td></td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

*P < 0.05 vs control group.

Table 6 Comparison of incidence of adverse reactions

<table>
<thead>
<tr>
<th>Group</th>
<th>Headache</th>
<th>Nausea</th>
<th>Fatigue</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group (n = 45)</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>8 (17.78)</td>
</tr>
<tr>
<td>Experimental group (n = 35)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1 (2.86)</td>
</tr>
<tr>
<td>χ² value</td>
<td>4.390</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P value</td>
<td>0.036</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION

In conclusion, this study provides evidence for the potential benefits of combining conventional drug treatments with TCM in managing depression syndrome. The significant decrease in TCM syndrome scores suggests improved patient outcomes. These findings underscore the potential value of an integrated treatment approach in enhancing therapeutic efficacy. However, more extensive studies with larger sample sizes and longer follow-up periods are needed to corroborate these findings and explore the long-term safety and effectiveness of this treatment strategy.
ARTICLE HIGHLIGHTS

Research background
Depression is a prevalent mental health condition that requires effective treatment. Traditional Chinese medicine (TCM) offers obvious advantages, fewer adverse reactions, and a lower recurrence rate in the treatment of depression.

Research motivation
This study was motivated by the need to evaluate the clinical benefits of Guipi decoction, known for its calming effects, combined with escitalopram oxalate tablets in individuals with depression. By assessing the impact of this combination therapy on TCM syndrome scores, depressive symptoms, and sleep quality, the study aimed to contribute to the development of safe and effective treatment options for individuals with depression.

Research objectives
The objective of this study was to evaluate the clinical benefits of Guipi decoction combined with escitalopram oxalate tablets for individuals with depression by assessing the impact of this combination therapy on TCM syndrome scores, depressive symptoms measured by the Hamilton depression rating scale (HAM-D) and self-rating depression scale (SDS), and sleep quality measured by the Pittsburgh sleep quality index (PSQI), and monitoring adverse reactions.

Research methods
In this study, a total of 80 patients diagnosed with depression were enrolled and divided into either a control group or an experimental group. All participants received oral escitalopram tablets as the standard treatment. The experimental group additionally received Jiajian Guipi decoction and reduced Governor vessel fumigation for a duration of 4 wk. Various assessment tools were used to measure the effects of the treatment. These measurements were performed before and after the treatment and compared between the two groups. Adverse reactions were closely monitored throughout the study.

Research results
After 4 wk of treatment, both the experimental and control groups demonstrated a significant reduction in traditional Chinese medicine (TCM) syndrome scores compared to their pre-treatment scores. However, the experimental group exhibited significantly lower TCM syndrome scores than the control group. Similarly, both groups showed significantly lower post-treatment SDS and HAM-D-24 scores compared to their pre-treatment scores, with the experimental group exhibiting lower scores than the control group. The total treatment efficiency was significantly better in the experimental group (97.14%) compared to the control group (77.78%). Additionally, after 4 wk of treatment, both groups had significantly lower PSQI scores compared to those before the treatment, with the experimental group showing lower scores than the control group. Furthermore, the incidence of adverse reactions was significantly lower in the experimental group compared to the control group.

Research conclusions
The combination of Guipi decoction and escitalopram oxalate tablets is an effective and safe treatment for depression. After 4 wk of treatment, both groups showed a significant reduction in TCM syndrome scores, indicating an improvement in the TCM symptoms associated with depression.

Research perspectives
The findings of this study provide valuable insights into the clinical benefits of combining Guipi decoction with escitalopram oxalate tablets for the treatment of depression. Further research could explore the long-term effects of this combination therapy and its impact on relapse rates and overall remission rates in individuals with depression. Additionally, investigating the underlying mechanisms by which Guipi decoction and escitalopram interact could contribute to a better understanding of the synergistic effects observed in this study. Future studies may also consider comparing the effectiveness of this combination therapy with other standard treatments or alternative interventions for depression. Overall, these research perspectives can broaden our knowledge and contribute to enhanced treatment strategies for individuals with depressive disorders.

FOOTNOTES

Author contributions: Yu J proposed the concept of this study; Xu FQ collected the data; Yu J and Xu FQ contributed to formal analysis; Xu FQ and Yu J participated in the investigation; Yu J and Xu FQ contributed to the methodology; Yu led the study; Xu FQ validated the study; Xu FQ and Yu J contributed to the visualization of the research; Xu FQ and Yu J drafted the manuscript; Yu J and Xu FQ reviewed and edited the manuscript.

Institutional review board statement: The study was approved by the Ethics Committee of Beijing Changping Hospital of Traditional and Western Medicine.

Informed consent statement: All study participants, or their legal guardian, provided informed written consent prior to study
enrollment.

Conflict-of-interest statement: All authors declare that there are no conflicts of interest to disclose.

Data sharing statement: No additional data are available.

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