

Original Article

Treatment of elderly patients with anxiety disorder by psychological counseling combined with auricular plaster therapy

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Received July 26, 2015; Accepted March 5, 2016; Epub March 15, 2016; Published March 30, 2016

Abstracts: Purpose: This study aims to evaluate the effect of psychological counseling combined with auricular plaster therapy in treating the elderly patients with anxiety disorders. Methods: 36 elderly patients with anxiety disorders were divided into experimental group and control group at random, with each group including 18 patients. The control group was only treated with psychological counseling while the experimental group was treated with auricular plaster therapy on the basis of psychological counseling. Before treatment and after 9 weeks' treatment, HAMA (Hamilton Anxiety Scale) and SAS (Self-Rating Anxiety Scale) score scales were used to test two groups of patients and estimate the curative effect of two groups by HAMA scale score reduction rate, then follow up and interview the cured patients for six months to observe the recurrence rate of the disease of each group. Results: Before the treatment, inter-group difference showed by general data of the two groups of patients had no statistical significance ($P>0.05$). When the two groups of patients had been treated for 9 weeks, HAMA and SAS grading of the two groups of patients had been evidently improved ($P<0.05$), and the SAS grading of experimental group was significantly improved as well ($P<0.05$). Compared with the control group, the inter-group difference had statistical significance ($P<0.05$); after follow-up and interview, it was found that the recurrence rate of the patients cured in the experimental group was significantly lower than that of the control group, $P<0.05$. Conclusion: Psychological counseling combined with auricular plaster therapy in treating the elderly patients with anxiety disorders had synergistic effect. The subjective symptoms of the patients receiving such treatment were evidently alleviated and such therapy was better recognized, which means that such therapy was evidently better than pure psychological counseling.

Keywords: Psychological counseling, auricular plaster therapy, combination, anxiety disorders, treatment effect

Introduction

In daily life, as people more or less demonstrate their worries and anxieties because of many sudden occurrences and uncertain factors, so, anxiety, as a kind of normal emotional reaction from daily life stress, is in effect a normal phenomenon. If the anxiety expressed by an individual evidently deviates from the normal social expressions or the conventional state of practical life, say, excessive worry or anxiety inconsistent with the reality, or even the daily living is affected to some extent, then the symptoms may be considered as anxiety disorders. Anxiety disorder is a kind of emotional disorder with anxious emotion as the main manifestation and its main symptoms include some

physical reactions like Dizziness, choking sensation in chest, tachycardia, polypnea, tremble, frequent micturition and urgent micturition etc, accompanied with emotional reactions, such as anxiety, fear and obsession etc [1, 2]. The reasons for anxiety disorder are complicated, but the main reasons inducing elderly anxiety disorder include declined physical functions, physique and action capacity of the old people, the empty nest phenomena, loneliness for lack of communication and valetudinarianism etc [3, 4]. With the coming of China's aging society, the numbers of patients with elderly anxiety disorders are on the rise, so, how to watch and improve the physical and psychological health of the old people has become an issue calling for the urgent attention of every family and the

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Table 1. Comparison of general data ($\bar{x} \pm s$)

Group	Male/ Female (number)	Age	Course of Disease (Months)	HAMA Assessment (Mark)
Control Group	11/7	65.77±6.47	5.34±3.26	21.62±4.50
Experimental Group	12/6	65.39±5.92	4.91±3.07	22.31±4.39

Note: $P > 0.05$.

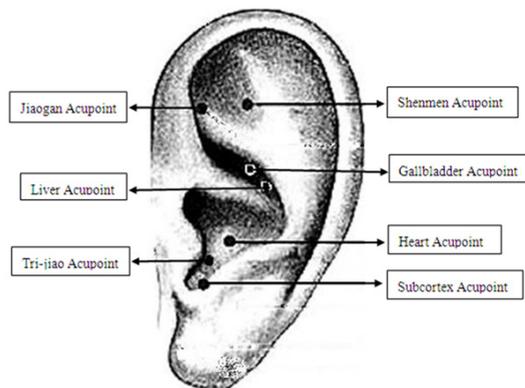


Figure 1. Note: according to the traditional Chinese medical theory, all the meridian vessels are connected with the ears. So, the Chinese traditional massage may create stimulus to the Shenmen Acupoint, Heart Acupoint, Liver Acupoint, Gallbladder Acupoint, Jiaogan Acupoint, Tri-jiao Acupoint, and Subcortex Acupoint of the ears, which can in turn adjust the meridian vessels to dispel melancholy and calm down the patient.

society [5]. For the patients with anxiety disorders, the common therapy mainly includes medicine or psychological counseling, but medicine may cause reliance and the individual patients may even become hostile to the medicines, as a result, the effect of such therapy is compromised. This study adopted the therapy of psychological counseling combined with auricular plaster therapy to practically treat the patients with elderly anxiety disorder and the effect was significant.

Objects and methods

Objects of the study

During the period from July, 2013 to April, 2014, a total number of 36 patients confirmed with anxiety disorders in the psychological counseling room of the hospital affiliated with Henan Polytechnic University from were treated as the objects of this study. Selection criteria of the patients included the diagnosis criteria

specified in *CCMD-3 (Chinese Classification and Diagnostic Criteria of Disorders)* and the grading ≥ 14 scores based on HAMA (Hamilton anxiety scale); Considering the convenience and controllability of the practical operations and the effect of age and cultural difference on the cognitive

competence and mentality of the patients, the patients were selected from the retired workers in the adjacent communities who had an education background of senior high school and above and were moderately mild with an HAMA grading < 29 ; Subjectively, these patients would like to accept and personally cooperate with the practical therapy, while the patients with other mental diseases, personality disorder, serious anxiety disorders as well as other organic diseases or serious body diseases were excluded therefrom. The patients selected were 60~75 years old and the course of their diseases was 2~12 months. Then, the patients were divided into an experimental group and a control group according to the random number table with each group consisting of 18 patients. The consistency check of the basic data of the two groups of patients showed that the inter-group difference had no statistical significance ($P > 0.05$), therefore, had comparability. See **Table 1**.

Treatment therapy

The patients of control group were treated with psychological counseling. The psychological counseling adopted verbal communication as the tool by which the patients developed confidence in the doctor so that a good information exchange and feedback mechanism is established, and the patients were treated by relying on the benign interaction of persuasion and feedback. In the treatment process, the professional psychological counseling staff provided psychological counseling to each patient but in a differentiated manner according to the personality and different causes of diseases of the patients. At the initial stage of psychological counseling, the psychological support therapy was mainly used for treatment, combined with explanation, encouragement, comfort and guarantee etc to get confidence of the patients. The doctors were required to first communicate with the patients by guiding them. In the pro-

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cess of communication, the doctors mainly listened to them to find out the reasons for and the roots of their diseases. In the middle and later stages of psychological counseling, the cognitive guidance, narrative therapy, emotional guidance and behavior therapy were mainly used, and in the process when the patients expressed and released their nervous and anxious emotions, emotional comb and cognitive reconstruction should be made to gradually correct their wrong cognition and adjust their ability to deal with their emotional changes. The patients were treated for 2 times every week with each treatment lasting for 30 minutes and the duration of such psychological counseling was 9 weeks.

On the basis of treatment with psychological counseling, the experimental group was simultaneously treated with auricular plaster which was conducted as follows: first, selected Shenmen Acupoint, Heart Acupoint, Liver Acupoint, Gallbladder Acupoint, Jiaogan Acupoint, Tri-jiao Acupoint, and Subcortex Acupoint on the auricles (See **Figure 1**); then use medical cotton balls to wipe auricles of the patients and found the sensitive spots of the acupoints selected; then past the prepared Cowherb seed medical small pieces of tape on the acupoints selected, and the Cowherb seed should be tightly pressed to the sensitive spots of the acupoints selected. In the process of the therapy, the patients pressed the Cowherb seed pasted on the acupoints by themselves to stimulate the acupoints selected and only one auricle was pasted every time, then change to the other auricle every three days and the two auricles were pasted and pressed alternatively. The pressing force should be gradually increased and the strength should be moderate and limited within the endurance of the patients, in which process the patients should have the feelings of broil and numbness. Each acupoint was pressed for about 20 times, then another acupoint was pressed to circularly press in turn. The patients should press for one time respectively in the morning and at night, pressing for about 20 minutes each time. The course lasted for 9 weeks.

Observation indicators

Before the treatment and 9 weeks after the treatment, the patients were evaluated with a Hamilton Anxiety Scale (HAMA) and a Self-

Rating Anxiety Scale (SAS). HAMA was mainly used to evaluate the severity of the patient's anxiety. In the process of evaluation, the professional evaluation personnel conducted evaluation by communicating with and observing the patients. The evaluation included 14 items and 0~4 scores were set for each item. The evaluation personnel conducted grading for each item according to the results of their communication and observations. The patients were divided into 5 grades according to the severity: total score ≥ 29 for serious anxiety symptom; total score ≥ 21 for evident anxiety symptoms; total score ≥ 14 for general anxiety symptoms; total score ≥ 7 for likely anxiety symptoms; and total score < 7 for no anxiety symptom. SAS was a convenient clinical tool used for analyzing the patient's subjective symptoms which could reflect the subjective feelings of the help seeker with anxiety trends. SAS adopted 4 levels of grading which were mainly used for evaluating occurrence frequency of the symptoms. It included 20 evaluation items and 1~4 scores were set for each item. In practice, 50 scores of the evaluated results were generally considered as the critical value in China: 50 scores or less for normal situation; 50~59 scores for mild anxiety; 60~69 scores for moderate anxiety; and 70 scores or above for serious anxiety.

Clinical evaluation of the treatment: HAMA reduction rate was adopted to evaluate the effect of the treatment and the calculation method for HAMA reduction rate was as follows: reduction rate (%) = (score before the treatment - score after the treatment) \div score before the treatment $\times 100\%$. There were four grades for the effect of the treatment: HAMA reduction rate $\geq 75\%$, $\geq 50\%$, $\geq 25\%$, and $< 25\%$ respectively meant cure, evident effect, effectiveness and ineffectiveness of the treatment.

Follow-up and interview: objective: observe the recurrence rate of the two groups of patients. Methods: two groups of patients were followed up for 6 months, then HAMA and SAS scale were used to score and test the cured patients in the two groups so as to find out whether their anxiety had recurred.

Data processing

Before and after the treatment, HAMA and SAS evaluation data from the 2 groups of patients

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Table 2. Pre- and after-treatment comparison of HAMA and SAS scores ($\bar{x} \pm s$)

Group	Male/Female (number)	HAMA Evaluation (score)		SAS Evaluation (Score)	
		Before	After	Before	After
Control Group	11/7	21.62±4.50	18.05±3.71 ^a	63.88±9.03	59.42±8.25 ^a
Experimental Group	12/6	22.31±4.39	16.94±4.19 ^a	64.12±8.70	54.30±7.79 ^{a,b}

Note: as for in-group comparison before and after the treatment, ^a $P < 0.05$; as for comparison between the control group and the experimental group at the same point of time, ^b $P < 0.05$.

Table 3. Comparison of clinical curative effect after 9-week treatment ($\bar{x} \pm s$)

Group	Male/Female (Number)	Cured (Number)	Evident Effect (Number)	Effective (Number)	Ineffective (Number)	Total Effective rate (%)
Control Group	11/7	5	5	6	3	83.33
Experimental Group	12/6	8	5	4	1	94.44 [*]

Note: as for comparison between the two total effective rates, ^{*} $P < 0.05$.

Table 4. Comparison of recurrence rate after 6-month follow-up observation ($\bar{x} \pm s$)

Group	Male/Female (Number)	Cure Rate after 9 Weeks		Recurrence Rate within 6 Months	
		Cure (number)	Cure Rate (%)	Recurrences (Number)	Recurrence Rate (%)
Control Group	11/7	5	27.78	2	40.00
Experimental Group	12/6	8	44.44 ^a	2	25.00 ^b

Note: for Comparison between cure rates, ^a $P < 0.05$; for comparison between recurrence rate, ^b $P < 0.05$.

were used to conduct statistical comparison with SPSS 13.0 statistical software package and the in-group data was compared as well. The inter-group data was also compared to see the improvement effects after the treatment. Data were expressed by ($\bar{x} \pm s$). The measurement data were compared by using t test, while the count data was compared by using \bar{x} test. $P < 0.05$ indicated that the difference had statistical significance.

Results

Before the treatment, for HAMA and SAS grading of the experimental group and the control group, the inter-group difference had no statistical significance ($P > 0.05$), see **Table 1**; 9 weeks after the treatment, HAMA and SAS grading of the 2 groups of patients was evidently improved than before the treatment ($P < 0.05$), and the improvement range of SAS grading for the experimental group of patients was more significant. The inter-group difference with the control group had statistical significance ($P < 0.05$), see **Table 2**. The comparison of the clinical curative effect evaluation showed that the total efficiency was 83.33% in the control group and 94.44% in the experimental

group. The total clinical efficiency of the experimental group was significantly superior to that of the control group, ($P < 0.05$), as was shown in **Table 3**; after 6 months' follow-up, 2 out of 5 cured patients in the control group recrudesced and the recurrence rate was 40.00%, while 2 out of 8 cured patients in the experimental group recrudesced and the recurrence rate was 25.00%. The clinical cure rate of the experimental group after 9 weeks' treatment was significantly higher than that of the control group (^a $P < 0.05$), and the recurrence rate of the control group within six months was significantly lower than that of the control group (^b $P < 0.05$). See **Table 4**.

Discussion

The anxiety disorder is a kind of frequently-occurring disease for old people. In the diseased period, the patients usually excessively rely on their families, the hospital and medicines so that they are unable to extricate themselves [6, 7], while the repeated and excessive taking of medicines may cause secondary damage to them. Such damages not only express itself as the damage to the patient's health as caused by the stimulation or side effects of

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medicines, but may produce great pressure to the patient's mentality, thus generating mental restlessness which, in turn, reduces the effect of the treatment. Psychological counseling, as its name implies, is to dredge the blocked mentality of the patient so as to achieve the object of treating and preventing mental illness and promoting physical and mental health [8-10]. In this study, the patients of control group received psychological counseling therapy, under which the doctor conducted verbal communication and guidance with the patient to gradually eliminate the patient's mental pressure in the process of treatment. The doctor and the patients first established mutual confidence, then, on the basis of understanding the reasons for and the roots of the disease, the doctor used many methods, such as cognitive guidance, narrative therapy, emotional guidance and behavior therapy etc., to guide and treat the patient. After the treatment for 9 weeks, we found that the grading of HAMA and SAS was evidently improved than that before the treatment ($P < 0.05$), which meant that the difference had statistical significance and the effect of the therapy met the relevant research achievements. There were many relevant research achievements about adopting the psychological counseling therapy to treat the patients with mental diseases, and the effect of such therapy has been universally recognized by the doctors and patients. The relevant research achievements have stated and analyzed the principles and mechanism of the therapy and sufficiently affirmed and verified its relevant effect of the therapy, so, it would not be elaborated in this study.

At present, some study showed that the anxiety disorders belong to hysteria and melancholia, which is closely related to the liver's function disorder. The patients were troubled by anger, worry, sadness and depression so that Yin-yang in their livers was disordered [11-13]. Relevant references show that the twelve meridians are connected to the ears, and the application of Cowherb Seed or small magnetic beads to press and massage special acupoints on the auricles (Such as Shenmen Acupoint, Heart Acupoint, Liver Acupoint, Gallbladder Acupoint, Jiaogan Acupoint, Tri-jiao Acupoint, and Sub-cortex Acupoint) can smooth the livers, dispel melancholy and tranquilizing mind etc [14-17]. In this study, the patients of the experimental group were treated with routine psychological counseling combined with auricular plaster for

9 weeks and we found that HAMA and SAS grading of the patients in experimental group was evidently better than level before the treatment ($P < 0.05$), and the improvement range of SAS grading was also better than that of the control group. It showed that subjective symptoms of the patients in the experimental group were evidently alleviated, and they had high cognition of the therapy. It could be seen from the cure rate of clinical curative effect and total effective rate that the curative effect of the experimental group was significantly higher than that of control group. Furthermore, according to the follow-up and interview within six months, the recurrence rate of the cured patients in the experimental group was significantly lower than that of the control group, $P < 0.05$. The results indicated that the curative effect of the experimental group was significantly better than that of the control group. In the experimental group, both the cure rate and total effective rate were higher, but its recurrence rate was lower in comparison with the control group.

The above results showed that the interference of psychological counseling combined with auricular plaster had synergistic effect in treating the elderly patients with anxiety disorders, and the mechanism of the therapy might be related to the physical and mental adjustment of the patient produced by pressing and massaging stimulation on their ear acupoints; In addition, the patients' ear acupoints in experimental group were pressed and massaged every morning and night because such was the time when the old people were most likely to be agitated and anxious. During these periods, auricular-plaster therapy could generate psychological hints to the patients so that the patients could adjust psychology and keep ataraxia as far as possible. Using auricular-plaster therapy to treat the elderly patients with anxiety disorders not only regulated qi and blood, smoothed the livers, dispelled melancholy and tranquilized the mind, but can give hints and adjustment to the anxious minds of the patients so as to achieve the effect of repairing the body and mind.

In conclusion, the result of the study showed that psychological counseling therapy combined with ear-acupoint plasters had synergistic effects in treating elderly patients with anxiety disorders. After the patients were treated,

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their subjective symptoms were evidently alleviated and the patients had high cognition to the therapy, therefore, the effect of such therapy was evidently better than pure psychological counseling. Moreover, as this therapy can be easily operated at low cost, it is more acceptable to and easily practiced by the old people, so, it is worthy of being applied and promoted.

Acknowledgements

Science and Technology Department of Henan Province (No. 142400410395).

Disclosure of conflict of interest

None.

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