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RESEARCH ARTICLE

Chronic fatigue syndrome treated by the traditional Chinese procedure abdominal tuina: a randomized controlled clinical trial

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Abstract

OBJECTIVE: To evaluate the effect of the traditional Chinese procedure abdominal Tuina (AT) on chronic fatigue syndrome (CFS).

METHODS: This randomized, single assessor-blinded clinical trial was carried out from May 2014 to April 2015. Eighty participants in the trial were divided randomly into two groups: experimental group and control. The experimental group (40 cases) was treated by AT and the control group (40 cases) by acupuncture. Each treatment was conducted once a day, 5 d for one course, at an interval of 2 d between each course. The whole treatment course lasted for 4 weeks. To ascertain the effect of AT and acupuncture, Fatigue Scale-14 (FS-14), Self-rating Anxiety Scale (SAS) and Hamilton Rating Scale for Depression (HAMD) scores were used before and after treatment. Patients were followed up for 3 months after treatment.

RESULTS: After treatment for 4 weeks, 77 patients (39 cases in the experimental group and 38 cases in the control group) completed the trial. The FS-14, SAS and HAMD scores decreased ($P < 0.05$) significantly compared with those before treatment in both groups. The FS-14 and HAMD ($P < 0.05$) scores in the experimental group were much lower than those in the control group. The difference in SAS scores between the two groups was not significant. In the final follow-up, CFS in two cases in the experimental group and three in the control group recurred, but the difference was not significant. The scores for the FS-14, SAS and HAMD in the experimental group were superior to those of the control group, and the difference was significant ($P < 0.05$). No serious adverse events and few adverse events were observed.

CONCLUSION: AT elicited a more efficacious effect than acupuncture alone on CFS.

Keywords: Tui Na; Acupuncture; Fatigue syndrome, chronic; Randomized controlled trial; Fatigue scale-14; Self-rating anxiety scale; Hamilton rating scale for depression

INTRODUCTION

Chronic fatigue syndrome (CFS) is characterized by severe fatigue with post-exertional delay in recovering from exhaustion, cognitive dysfunction, and influenza-like symptoms.[1] The estimated worldwide prevalence of CFS is 0.4%-2.5%, it occurs more frequently among people aged 20-40 years, and the female∶male ratio is 3∶1.[2] CFS is a major public-health problem, incurring extensive costs for medication, nursing and disability.[3,4]

CFS is a complicated illness that is incompletely understood. It has been described as a disorder of the brain, immune system, or endocrine system; studies have shown that the underlying pathophysiologic process involves all of these systems.[5-10]

Tuina is a form of manipulative therapy often used in conjunction with acupuncture, moxibustion, fire-cupping, t'ai chi, and qigong carried out in China. Tuina uses Chinese Taoist principles to bring the eight principles of Traditional Chinese Medicine (TCM) into balance.

Abdominal Tuina (AT) is a combination of Tuina and abdominal examination that was first recorded in about 150 AD by Zhang Zhongjing in his book Treatise on Febrile and Miscellaneous Diseases. Now, it is mainly practiced in Henan, Hebei, Shanxi and other areas of north China. With its distinctive features, independent and complete theoretical system, AT has become a popular form of TCM.

Immune regulation, improving sleep quality, coenzyme therapy, low-dose hormone therapy, exercise, cognitive therapy and anti-anxiety drugs[11] have been used to treat CFS outside China. However, symptomatic treatment alone is not efficacious for CFS.

Several studies have reported that AT is effective for CFS. AT has been found to be more popular and safer than acupuncture.[12] We have studied non-drug therapies of CFS for several years, and have sifted through more than 1000 cases of clinical and experimental research data related to CFS. By analyzing those data, we found that AT is associated with a short course of treatment, a high prevalence of cure, and low prevalence of recurrence.[13,14] In the present study, we evaluated the effect of AT on CFS.

METHODS

Diagnostic criteria for CFS

The diagnosis of CFS can be complicated by five main factors: laboratory tests or biomarkers for CFS are lacking; fatigue and other symptoms of CFS are common to many other illnesses; symptoms in some CFS patients may not be recognized by physicians; CFS has a pattern of remission and relapse; symptoms vary from person to person in type, number, and severity. These factors can lead to misdiagnosis. Of the 1-4 million people living in North America who have CFS, fewer than 20% have been diagnosed.

Participants in the present study met the recommendations for the clinical diagnosis of CFS set by the US Centers for Disease Control and Prevention (CDC).[15] That is, participants were diagnosed as having a CFS-like illness if they had unexplained, persistent fatigue of new onset for ≥ 6 months accompanied by ≥ 4 of 8 symptoms (i.e., unrefreshing sleep, new headaches, impaired memory, impaired concentration, post-exertional malaise, muscle pain, sore throat, and tender lymph nodes) and did not report a history of cancer, hypothyroidism, sleep apnea, narcolepsy, hepatitis B/hepatitis C-virus infection, severe obesity, or mental disorders (major depressive disorder, schizophrenia, bipolar disorder, or alcohol or other substance abuse based on a medical-history checklist).[15]

Inclusion criteria

The inclusion criteria were: (a) aged 18-60 years; (b) met the diagnostic criteria for CFS set by the CDC; (c) provided verbal and written informed consent.

Exclusion criteria

The exclusion criteria were patients: (a) with cardiovascular, cerebrovascular, liver, kidney, lung, or hematopoietic-system disease; (b) suffering from severe hypertension or diabetes mellitus; (c) with mental disorders; (d) were pregnant or breast-feeding; (e) with combined thrombocytopenia and coagulation disorders; (f) who were severely obese.

Study design

This was a randomized, single assessor-blinded clinical trial. It was carried out in the First Teaching Hospital of Tianjin University of TCM (Tianjin, China) from May 2014 to April 2015. The study was conducted in accordance with the Declaration of Helsinki. The study protocol was approved by the Ethics Committee of the First Teaching Hospital of Tianjin University of TCM within the China Academy of Chinese Medical Sciences.

Patients

Participants were recruited through posters and specialist recommendations in the First Teaching Hospital of Tianjin University of TCM. All participants provided written informed consent after the trial procedures had been explained fully. The participants were informed that they could end the study at any time without giving a reason, and that all collected data would be available only to the researchers. They were also informed that their workload would not be affected by participation in our trial.

Randomization and blinding

Eligible participants were assigned randomly to the experimental group or control group at a 1∶1 ratio using a random-number generator through a personal com-