Complementary Therapies in Clinical Practice 16 (2010) 198–202

Contents lists available at ScienceDirect

Complementary Therapies in Clinical Practice

journal homepage: www.elsevier.com/locate/ctnm

Effect of acupressure at the Sanyinjiao point on primary dysmenorrhea: A randomized controlled trial

Farzaneh Kashefi [a,*], Samaneh Ziyadlou [b], Marjan Khajehei [c], Ali Reza Ashraf [d], Ali Reza Fadaee [e], Peyman Jafari [f]

[a] Faculty Member, Northern Khorasan University of Medical Sciences, Bojnoord, Iran
[b] Faculty Member, Department of Midwifery, Fatemeh(P.B.U.H) College of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran
[c] Curtin Business School, Curtin University of Technology, Perth, Western Australia, Australia
[d] Faculty Member, Physical Medicine and Rehabilitation, Department of Rehabilitation, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran
[e] Faculty Member, Fellow of Pain Management, Azad University of Mashhad, Mashhd, Iran
[f] Faculty Member, Department of Statictics, Shiraz University of Medical Sciences, Shiraz, Iran

Keywords:
Primary dysmenorrhea
Acupressure
San Yin Jiao
Acupoint
Menstrual pain

A B S T R A C T

Objective: We conducted this study to assess the effect of acupressure at the Sanyinjiao point on primary dysmenorrhea.
Methods: Eighty-six students participated in the study. All participants met the inclusion criteria. The study group received acupressure at Sanyinjiao point, while the control received sham acupressure. The severity of dysmenorrhea was assessed at the following time periods: prior to the intervention, 30 min, 1, 2 and 3 h following the intervention. Data were analyzed using SPSS.
Results: The acupressure caused decline in the severity of dysmenorrhea immediately after intervention in both groups during their first menstrual cycle, although, there difference was not significant ($p > 0.05$). In addition, during the same cycle, the severity of the dysmenorrhea decreased more in study group rather than control group at 30 min, 1, 2 and 3 h after intervention ($p < 0.05$). During the second menstrual cycle, acupressure made dysmenorrhea reduced in both study and control groups; however, the decline was more salient among participants of the study group at all stages after the intervention ($p < 0.05$).
Conclusions: Acupressure at Sanyinjiao point can be an effective, feasible, cost-effective intervention for improving primary dysmenorrhea.

1. Introduction

Dysmenorrhea is a common problem in women of reproductive age.[1] Fifty percent of women suffer dysmenorrhea, and 10% are in capacitated for 1 to 3 days each month.[1,2] Various symptoms may accompany painful menstruation[3] and can be disruptive to life at school, work, or home and might be responsible for economic burdens.[4]

For many years, several chemical remedies have been used to relief this disabling pain. Nonsteroidal anti-inflammatory medicines are the established therapy of choice in women with primary dysmenorrhea[5]; however, they are associated with many side effects, such as diarrhea, stomachache and nausea.[6]

On the other hand, alternative treatment options such as herbs, dietary supplements, and vitamins and minerals have been seek to treat women's health issues. Although a recent review found promising evidence supporting the use of Chinese herbal medicine for primary dysmenorrhea, in order to skip the side events of chemical drug, results are limited by the poor study design.[7]

Furthermore, several techniques have been used to subside menstrual pain, including nerve ablation,[8] spinal manipulation,[9] static magnet application,[10] transcutaneous electrical nerve stimulation ear point tapping and pressing therapy,[11] acupuncture,[12] and acupressure.[13]

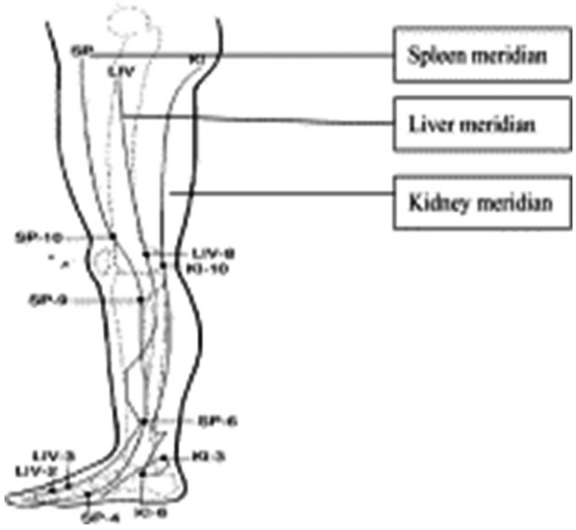
According to previous studies acupuncture is effective for pain relief,[14] and dysmenorrhea has been palliated due to acupuncture of specific sites such as the San Yin Jiao (SP6) point.[15] The SP6 acupoint is the junction point of the liver, spleen, and kidney meridians, and based on principles of traditional Chinese medicine it is proposed to strengthen the spleen, resolve and expel dampness, and restore balance to the Yin and blood, liver, and kidneys.[16] Notwithstanding

* Corresponding author. Tel.: +98 09355992409.
E-mail addresses: kashefif85@gmail.com (F. Kashefi), sziyadlou@yahoo.com (S. Ziyadlou), marjan.khajehei@postgrad.curtin.edu.au (M. Khajehei).

1744-3881/$ – see front matter © 2010 Elsevier Ltd. All rights reserved.
doi:10.1016/j.ctcp.2010.04.003

these scientific relationships, the evidence for acupressure intervention in women with dysmenorrhea is unclear.

Therefore, we set out the present study to investigate clinical- and cost- effectiveness of acupressure compared with sham pressure in women suffering dysmenorrhea.



2. Method

A single-blind clinical trial was conducted in Medical University of Sciences in Iran. The protocol received institutional review board approval. Permission to conduct the study and access to the female students were obtained from the director of the Medical University. Eighty-six students, presenting previous history of repeated dysmenorrhea, participated in this study. Having suffered moderate to severe pain, participants were given a detailed description of the intervention protocol. Recruited participants in the two groups received a written description of the research purposes, and given written informed consent after the procedures had been fully explained. They were randomly assigned to the study group ($n = 43$) and control group ($n = 43$).

The inclusion criteria were:(a) female college students between the ages of 18–28 years, (b) had regular menstrual cycles, (c) single were students Iranian (d), dysmenorrhea with pain scoring higher than four on the Pain Visual Analogue Scale (PVAS: range 0–10), (e) no prior history of gynecological disease or secondary dysmenorrhea, (f) no pain medication taken before the expected onset of each menstrual period and 3 h after intervention, (g) signature testimonial about intervention.

These were eight demographic measures, four questions about dysmenorrhea, one scale about dysmenorrhea, and one question each about likelihood for self-managing future dysmenorrhea and expectations of acupressure.

PVAS was used for assessing the intensity of the dysmenorrhea pain. It is a reliable and valid tool and is shown to be useful in the evaluation of menstrual pain.[4] The PVAS consists of a 10 cm horizontal scale with verbal descriptors, such as “no pain” on one end and “worst possible pain” on the other.

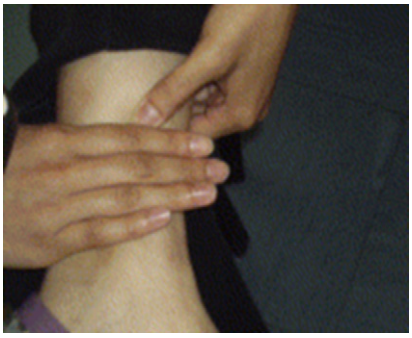
Moreover, a Short-Form of the McGill Pain Questionnaire (SF-MPQ) was used in this study. The McGill Pain Questionnaire was developed in 1975 and has been widely used to assess post-operative, chronic, and dysmenorrhea pain.[13] The main component of the SF-MPQ consists of 15 descriptors (11 sensory; 4 affective) that are rated on an intensity scale as 0 = none, 1 = mild, 2 = moderate, and 3 = severe. Three pain scores are derived from the sum of the intensity rank values of the words chosen for sensory, affective, and total descriptors.

Ten experts examined the content validity of questionnaires.

In order to determine the exact area of SP6 on the leg of participants in the study group, a portable battery-powered pointscope Unit was placed on the lower area of leg’s skin, 5 cm above medical Malleolus (SEVESA model, Germany). The red lamp was turning on, if the SP6 was right under the Unit.

The specialized physician trained researcher to perform acupressure on the SP6 point. Then, the researcher conducted acupressure therapy during each person’s menstrual cycle. The study group received acupressure at Sanyinjiao point (above the ankles). Moreover, control group ($n = 43$) received acupressure on the sham point.[4] This point is located in the dorsal compartment of the leg and is not situated upon the Achilles tendon. According to the specialists in acupressure and acupuncture and with regard to the text books, this point is not placed on the especial meridian.[17]

During the first 24 h of their initial menstrual cycle, the participants were placed in the prone position on an intervention table, with a pillow under their head, shoulders and knees. Study group received acupressure alternately on each leg at the Sanyinjiao (SP6) acupoint (above the ankle). The force applied to the acupoint was initially 1.21 kg, increasing to 3.53 kg at the end of therapy for each pressure cycle on each side. SP6 was pressed with the researcher’s thumb for 6 seconds and released for 2 seconds without pressure, and this was continued for 30 min and repeated for two menstrual cycles. For Control group the researchers pressed with thumb on the sham point. After receiving the 30-min acupressure intervention, both groups completed the VAS immediately after, 30 min, 60 min, 120 min, and 180 min following the intervention.



The demographic and menstrual data summarized with descriptive statistics such as frequencies, percentage and test-means were used to analyze the homogeneity between the two groups. Five participants (acupressure = 3, control group = 2) failed to complete the study for one of the following reasons: sought medical advice elsewhere, withdrawal, and vacation. Repeated Measure Analyses of Variance was used by two groups. The accepted level of significance for all analyses was $p < 0.05$.For computation Data statistical soft ware package for the social sciences (SPSS), version 13.

3. Results

A total of eighty-six participants suffering primary dysmenorrhea enrolled in the study.

Three participants dropped out during the first month and two during the second month of the intervention (respectively, 2 and 1 in the SP6 acupressure group; 1 and 1 in the control group). The analysis was thus based on 81 participants during the study (39 in the SP6 acupressure group and 41 in the control