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Effect of self-acupressure for symptom management: A systematic review

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Acupressure;
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Abstract
Objectives: To assess the efficacy and safety of self-administered acupressure to alleviate symptoms of various health problems, including allergic disease, cancer, respiratory disease, dysmenorrhea, perceived stress, insomnia, and sleep disturbances.
Methods: We searched core, Korean, Chinese, and Japanese databases, including Ovid-MEDLINE, Ovid-EMBASE, the Cochrane Central Register of Controlled Trials (CENTRAL), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), six representative electronic Korean medical databases, China National Knowledge Infrastructure (CNKI), and Japan Science and Technology Information Aggregator (J-STAGE). We included randomized controlled trials (RCTs) and quasi-RCTs that examined disease-specific effects or symptom relief, adverse reactions, and quality-of-life (QOL) for self-administered acupressure. Data collection and assessment of the methodological quality of the included studies were conducted by two independent reviewers.
Results: Eight RCTs and two quasi-RCTs showed positive effects and safety of self-acupressure therapy in clinically diverse populations. Quality assessment revealed moderate quality for the RCTs, with 50% or more of the trials assessed as presenting a low risk of bias in seven domains. All of the selected 10 studies reported positive effects for primary outcomes of self-acupressure therapy for symptom management, including significant improvements in symptom scores in allergic disease, nausea and vomiting in cancer, symptom scores in respiratory disease, pain symptoms in dysmenorrhea, and stress/fatigue scores and sleep disturbances in healthy people.

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Conclusions: Our findings suggest that self-administered acupressure shows promise to alleviate the symptoms of various health problems. Therefore, further research with larger samples and methodologically well-designed RCTs is required to establish the efficacy of self-administered acupressure.

Introduction

Acupressure involves applying pressure to specific points on the body using the hands, fingers, thumbs, elbows, feet, or various devices.[1–3] According to the meridian theory, acupressure increases the flow of energy (qi) in the body; therefore, it is effective for managing symptoms of disease.[4] Acupuncture, which is considered a representative treatment of alternative and complementary medicine, uses fine needles inserted in specific points on the body. Acupressure utilizes application of pressure to acupoints without penetrating the skin.[1,2] Acupressure is non-invasive and typically painless, and adverse reactions caused by insertion of fine needles can be avoided.[3] Moreover, self-acupressure can be administered in any situation, regardless of time and place, and self-treatment can be conducted without expensive costs. Self-acupressure is acupressure performed by trained participants without treatment by practitioners or healthcare providers.

Several systematic reviews of acupressure performed by practitioners have been reported.[2,3,5] However, no systematic review of self-acupressure with its various advantages, such as economical and convenient use, has been published. In order to develop acupressure as a self-administered therapy, it was necessary to understand the evidence supporting self-acupressure. Thus, this systematic review aimed to estimate the efficacy and safety of self-acupressure to alleviate symptoms of various health problems.

Methods

Data sources and searches

We conducted an extensive and comprehensive literature search of core, Korean, Chinese, and Japanese databases. The core databases were Ovid-MEDLINE, Ovid-EMBASE, the Cochrane Central Register of Controlled Trials (CENTRAL), and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). Korean databases included KoreaMed, Korean Medical Database (KMbase), Korean Studies Information Service System (KISS), National Discovery for Science Leaders (NDSL), and Korea Institute of Science Technology Information (KISTI). We also utilized the Oriental Medicine Advanced Searching Integrated System (OASIS). Chinese and Japanese databases were included in our search, specifically China National Knowledge Infrastructure (CNKI) and Japan Science and Technology Information Aggregator (J-STAGE). The search was conducted from 28 April 2013 to 7 May 2013. The search terms used were ''acupressure,'' ''self,'' and ''acupuncture.'' Medical Subject Headings (MeSH) terms and text words were used to adjust the search characteristics for each database. The only search limitation was intervention for high sensitivity, and there were no limitations on diseases, patients, or language.

Study selection

The inclusion criterion was self-administered acupressure. The final treatment interventions were carried out by the participants after they received training in the intervention procedure. All studies related to self-administered acupressure were included, regardless of the acupressure techniques applied. The studies included in this systematic review were randomized controlled trials (RCTs) or studies with a quasi-RCT design. Comparisons were sham acupressure, standard of care, and no treatment. The participants came from the general population or were patients with any type of disease. The outcomes included disease-specific effects, symptom relief, adverse reactions, and quality of life. Studies with final interventions performed by practitioners or healthcare providers were excluded. Studies reporting a mixture of interventions were also excluded, as were those reporting non-human target populations and interventions other than acupressure. In addition, there was no a priori exclusion criterion based on publication language.

Data extraction and quality assessment

Two researchers independently extracted the data using a predetermined extraction form. For papers where the major outcomes were presented in graphical form, the corresponding author was contacted. The intention-to-treat (ITT) analysis was used if both ITT and per-protocol (PP) analyses were presented in the study. Disagreements regarding extracted data were resolved by consensus with a third person. The extraction form included the study design, the number and characteristics of participants, follow-up periods, primary and secondary outcomes, country of publication, treatment regimens, main acupoints, and methods of teaching self-acupressure.

The quality of the RCTs was assessed using the Cochrane Risk of Bias (RoB) tool.[6] The RoB tool assessed seven dimensions: sequence generation, allocation concealment, blinding of participants, personnel and outcomes, incomplete outcome data, selective outcome reporting, and other sources of bias. In this study, funding sources were confirmed in order to assess other sources of bias. Quasi-RCTs were assessed using the Risk of Bias Assessment tool for Non-randomized Studies (RoBANS), which evaluated selection of participants, confounding variables, measurement of intervention (exposure), blinding for outcome assessment, incomplete outcome data, and selective outcome reporting.[7]