



Review

Effectiveness and safety of using acupoint Shui Gou (GV 26): A systematic review and meta-analysis of randomized controlled trials



Xiao-Yang Hu^{a,*}, Esme Trevelyan^a, Qian-Yun Chai^b, Cong-Cong Wang^b, Yu-Tong Fei^b, Jian-Ping Liu^b, Nicola Robinson^a

^a Faculty of Health and Social Care, London South Bank University, London, UK

^b Centre for Evidence-Based Chinese Medicine, Beijing University of Chinese Medicine, Beijing, China

ARTICLE INFO

Article history:

Received 22 October 2014

Accepted 13 December 2014

Keywords:

GV26

Shui Gou

Safety

Systematic review

Meta-analysis

ABSTRACT

Background: GV26 is well known as an emergency and a revival acupoint. It has been most commonly used for acute neurological conditions and acute low back strain (ALBS). This systematic review evaluates the effectiveness and occurrence of adverse effects of using GV26 for a variety conditions; and to determine the appropriate parameters to inform its use in practice.

Methods: Randomized controlled trials evaluating stimulation of GV26 as a sole or as an adjunct to treatment for any condition were included. Quality of reporting and methodology were assessed using STRICTA and the Cochrane risk of bias tool. Meta-analysis was pooled with RevMan 5.2 software (Protocol ID: CRD42013006528).

Results: Fifteen trials investigated conditions which included shock, epilepsy, vascular dementia, febrile seizures in children, post general anesthesia, acute low back strain, functional enuresis, and intractable hiccups. The reporting quality and methodological quality of all included trials was limited. Data from eleven trials were pooled. Significant favorable improvements were shown for GV26 used in addition to other common acupoints as measured by efficacy rate; GV26 in addition to usual care as measured by blood pressure. No study reported any adverse effects.

Conclusions: There appears to be evidence on the use of GV26 for improving efficacy rate in ALBS, functional enuresis and intractable hiccups, and it appears to be effective in increasing blood pressure and reducing heart rate during revival. However, the findings should be interpreted with caution due to the limited methodological quality of included trials.

Crown Copyright © 2015 Published by Elsevier GmbH. All rights reserved.

Contents

| | |
|--|---|
| 1. Introduction..... | 2 |
| 2. Methods..... | 2 |
| 2.1. Data sources and search terms..... | 2 |
| 2.2. Inclusion and exclusion criteria..... | 2 |
| 2.3. Data extraction..... | 2 |
| 2.4. Quality of selected studies..... | 2 |
| 2.5. Data synthesis and analysis..... | 2 |
| 2.6. Subgroup analysis..... | 3 |
| 3. Results..... | 3 |
| 3.1. Quality of reporting..... | 3 |
| 3.2. Risk of bias in included trials..... | 4 |
| 3.3. Study characteristics..... | 4 |
| 3.4. Period of stimulation..... | 4 |

* Corresponding author. Tel.: +44 0207815 8350; fax: +44 0207815 8490.

E-mail addresses: huxy1119@gmail.com, hux2@lsbu.ac.uk (X.-Y. Hu).

| | |
|--|---|
| 3.5. Range of interventions | 4 |
| 3.6. Outcome measure | 4 |
| 3.7. Effect estimation | 4 |
| 3.7.1. Total efficacy rate | 6 |
| 3.7.2. Systolic blood pressure | 6 |
| 3.7.3. Diastolic blood pressure | 6 |
| 3.7.4. Mean blood pressure | 6 |
| 3.7.5. Heart rate | 6 |
| 3.7.6. Modified Robertson scale | 6 |
| 3.7.7. MMSE AND HDS-R | 7 |
| 3.8. Adverse effects | 7 |
| 3.9. Sensitivity analysis and publication bias | 7 |
| 4. Discussion | 9 |
| 5. Conclusion | 9 |
| Conflict of interest | 9 |
| Appendix A. Search strategy | 9 |
| References | 9 |

1. Introduction

In Chinese medicine, the acupuncture point GV26, also known as DU26 (Shui Gou [水沟], Ren Zhong [人武], Gui Gong [鬼宫]) is well known as an emergency or revival acupoint along governing vessel (GV)/DU meridian. The acupoint is located where the GV and hand/foot Yang Ming meridian cross. Due to its important location, its function is described as 'wakening the spirit (shen) [神]', and 'opening up the sensory orifices and stimulating the brain' [醒神开窍]. It is surrounded by many nerves and blood vessels, and it has been suggested that the infraorbital branch of the trigeminal nerve is the afferent pathway which is activated when acupuncture is given at GV26 [1,2]. A study on the mechanism of GV26 has shown that electro-acupuncture to this point can stimulate the excitability of cortical neurons and facilitate synaptic transmission in the motor cortex. Low frequency electro-acupuncture at GV26 can also promote neuron repair and healing after ischemia [3].

As one of the 'five heart points' [五心穴], historically GV26 has been most commonly used in clinical practice for acute neurological conditions that involve coma, convulsion or seizures, acute symptoms such as acute low back strain (ALBS) and sometimes diabetes [4]. Potential mechanisms which have been supported by animal studies suggest that the reason GV26 could potentially increase blood pressure (BP), decrease heart rate (HR), control urine production rate and accelerate the time to waken. These may be based on stimulation of the infraorbital branch of the trigeminal nerve and are thought to enhance the excitability of adrenergic receptors, thus activate depressor reflexes and effect BP, HR, and trigger urine reaction [5]. Others have suggested that the reaction is related to blue plaques nuclear and certain neurotransmitters in the nuclear [6]. One study has shown that stimulation of GV26, GV20 and HT7 can activate the glucose metabolism in the frontal lobe and thalamus for both sides of the brain, as well as the temporal lobe and putamen on the healthy side of the brain thus potentially help improving vascular dementia [7,8].

Though GV26 has shown some effectiveness for various conditions, no systematic review has been previously conducted. This review aimed to evaluate the effectiveness and reporting of adverse effects as a result of using acupuncture point GV26 for a variety conditions; and to determine the appropriate parameters to inform future clinical practice and research.

2. Methods

This systematic review has been conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and has been registered with PROSPERO (registration number: CRD42013006528) [9].

2.1. Data sources and search terms

The literature searches were carried out using the following databases; Pubmed, AMED, Cochrane Library resources, CINAHL, PsycINFO, ScienceDirect for English databases; and CNKI (China National Knowledge Infrastructure), VIP, Wanfan for Chinese databases. All the databases were searched from their inception to October 2013 using the terms "DU26" or "GV26" or "Shui Gou" ["水沟" or "人武" or "鬼宫"]. Details of the search strategies are provided in the appendix.

2.2. Inclusion and exclusion criteria

All published randomized controlled trials (RCT) published in English or Chinese evaluating the clinical effectiveness, and/or safety of GV 26 for any condition from inception to October 2013 were included.

Participants: Trials with patients irrespective of age and condition were included in this review. **Interventions:** Trials of stimulation GV26 with acupuncture, acupressure, electronic acupuncture, transcutaneous electrical nerve stimulation (TENS), laser, or any kind of acupoint electrical stimulation will be included in this review. **Comparisons:** Studies comparing GV26 versus no stimulation/sham GV26; studies evaluating GV26 plus usual care/other (i.e. massage, Tuina, other acupoints) versus usual care/other treatment; studies evaluating a group of acupoints including GV26 versus the group of acupoints without GV26. **Outcome measures:** The primary outcome was global assessment (i.e. the proportion of patients improved or cured). Secondary outcomes have included blood pressure (BP), recovery time, mental status, and reporting of adverse events attributed to the use of GV26.

2.3. Data extraction

Clinical characteristics extracted included: study ID, country where the study was conducted, sample size, age range (if possible), condition, time of onset of the condition, method of stimulating GV26 (including details of manipulation), treatment & control group intervention, treatment regimen, assessment time point and period of follow-up, outcome measures, measurement results, relevant significant values and adverse effects.

2.4. Quality of selected studies

Two reviewers independently assessed the reporting quality and methodology quality (risk of bias) using Standards for Reporting Interventions in Clinical Trials of Acupuncture (STRICTA) checklist and Cochrane Review Handbook in both English and Chinese languages.

2.5. Data synthesis and analysis

The heterogeneity of participants in terms of their sociodemographics, disease/condition, method of stimulating GV26 and different comparison groups, various outcomes measures employed and the follow up period were assessed. $I^2 > 50\%$ was

Download English Version:

<https://daneshyari.com/en/article/2616177>

Download Persian Version:

<https://daneshyari.com/article/2616177>

[Daneshyari.com](https://daneshyari.com)