Table des matières

Ankle Sprain

Entorse de la cheville : évaluation de l'acupuncture

Articles connexes : - pathologie et zheng - conduites thérapeutiques - acupuncture expérimentale -

1. Systematic Reviews and Meta-Analysis

☆☆☆	Evidence for effectiveness and a specific effect of acupuncture.
☆☆	Evidence for effectiveness of acupuncture.
☆	Evidence for effectiveness of acupuncture mais limitées qualitativement et/ou quantitativement.
Ø	No evidence or insufficient evidence.

1.1. Generic Acupuncture

1.1.1. Liu 2020 ☆

Liu AF, Gong SW, Chen JX, Zhai JB. Efficacy and Safety of Acupuncture Therapy for Patients with Acute Ankle Sprain: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Evid Based Complement Alternat Med. 2020. [213669]. doi

Background	The efficacy of acupuncture for acute ankle sprain (AAS) is controversial. This study aimed to critically assess the efficacy and safety of acupuncture for AAS.
Methods	Parallel-group randomized controlled trials (RCTs) were included regardless of language or publication date. Participants with AAS were included regardless of age, sex, race, nationality, or diagnostic criteria for AAS. Experimental interventions included acupuncture alone or in combination with traditional therapies. Control interventions included no treatment, placebo, or traditional therapies. The primary outcome was the Kofoed ankle score. The secondary outcomes included visual analogue scale, duration of pain, use of painkiller, ankle circumference, effective rate, cure rate, and adverse events. PubMed, Embase, Cochrane Library, Web of Science, China National Knowledge Infrastructure, Wanfang Digital Periodicals, and Chinese Science and Technology Periodicals database were searched to identify potentially eligible studies from inception to September 10, 2020. World Health Organization International Clinical Trials Registry Platform (WHO ICTRP), ClinicalTrials.gov, Chinese Clinical Trial Registry (ChiCTR), and the reference list of eligible RCTs were checked to identify ongoing or unpublished studies. Risk of bias was assessed by the Cochrane Collaboration's tool. Statistical analyses were performed by RevMan 5.3 software. $P < 0.05$ indicated statistical significance.

Results	**Seventeen eligible studies** were included for the statistical analysis. There was no statistically significant difference of Kofoed ankle score between acupuncture and Rest, Ice, Compression, and Elevation (RICE) group (P=0.75). However, acupuncture could significantly relieve pain (P=0.02) and increase cure rate (P=0.004) compared with RICE. Moreover, acupuncture plus RICE could also significantly relieve pain (P < 0.00001) and increase cure rate (P=0.01) compared with RICE alone. Acupuncture combined with massage could significantly relieve pain (P=0.04) compared with massage alone. Acupuncture plus Chinese medicine might be more effective for relieving pain (P < 0.00001), reducing the duration of pain (P < 0.00001), and increasing cure rate (P=0.0002) compared with Chinese medicine alone. Two studies reported no adverse reactions. One study reported that a participant suffered from mild drug-related allergic reaction and was healed without treatment.
Conclusions	The findings of the present study suggest that acupuncture may be beneficial for AAS. However, more large-scale and well-designed RCTs are warranted.

1.1.2. Kim 2014 Ø

Kim Th, Lee Ms, Kim Kh, Kang Jw, Choi Ty , Ernst E. Acupuncture for treating acute ankle sprains in adults. Cochrane Database Syst Rev. 2014;(6):CD009065. [183395].

Background	An acute ankle sprain is a sudden-onset injury of one or more of the ankle ligaments. It is one of the most common musculoskeletal injuries in the general population as well as in athletes. In some countries, such as China and Korea, acupuncture is frequently used in the treatment of ankle sprains, either as a single treatment or a secondary intervention accompanied by standard medical treatment.
Objectives	To assess the effects (benefits and harms) of acupuncture for the treatment of ankle sprains in adults.
Methods	We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (May 2013), the Cochrane Central Register of Controlled Trials (The Cochrane Library 2013, Issue 4), MEDLINE (1948 to May week 2 2013), EMBASE (1980 to May week 2 2013), China National Knowledge Infrastructure databases (1994 to August week 4 2013), the Cumulative Index to Nursing and Allied Health Literature (1937 to May 2013), the Allied and Complementary Medicine Database (1985 to May 2013), Science Links Japan (1996 to August week 4 2013), several Korean medical databases (August week 4 2013), the World Health Organization International Clinical Trials Registry Platform (August week 4 2013), the bibliographic references of included trials and conference proceedings. Selection Criteria : We included randomised and quasi-randomised controlled trials involving adults with acute ankle sprains. We included all types of acupuncture practices, such as needle acupuncture, electroacupuncture, laser acupuncture, pharmacoacupuncture, non-penetrating acupuncture point stimulation (e.g. acupressure and magnets) and moxibustion. Acupuncture could be compared with control (no treatment or placebo) or another standard non-surgical intervention. Data collection and analysis : Two review authors independently screened the search results, assessed trial eligibility, assessed risk of bias and extracted data from the included trials. We calculated risk ratios (RRs) for dichotomous outcomes and mean differences for continuous outcomes. We conducted meta-analyses using the fixed-effect method or, where appropriate, the random-effects method, and used 95% confidence intervals (CI) throughout.

Main Results	We included a total of **20 heterogeneous studies (2012 participants with acute ankle sprains);** three of which included more than one comparison. Seventeen trials were conducted in China. All of the studies had a high risk of bias due to lack of blinding. The results may also have been affected by selection bias, particularly as five studies were quasi-randomised controlled trials and 12 studies gave no information on their method of randomisation. Of our three prespecified primary outcomes, only cure rate was reported by the majority of studies. No study reported on patient-reported assessment of function and only one reported on adverse events (in which three participants receiving a control intervention experienced skin problems from over-the-counter Chinese herbal patches). The other 19 studies did not record or report on adverse events. We assessed the quality of evidence for cure rates as very low for all comparisons, which means we are very uncertain about the reliability of any of the estimates.The single study comparing acupuncture treatment with no treatment found acupuncture to be more effective with regard to cure rate at five days (31/31 versus 1/30; RR 20.34, 95% CI 4.27 to 96.68). Acupuncture plus another standard treatment versus that standard treatment alone was tested in eight studies; with cure rate data available for seven. Most of these studies reported higher cure rates in the acupuncture plus another standard treatment group than in the standard treatment alone group. **However, while the results of an exploratory meta-analysis of cure rate data from eight trials testing acupuncture versus no acupuncture tended to favour acupuncture**, the results were very inconsistent across the studies and the estimated effect was very imprecise (383/396 versus 272/355; RR 1.32, 95% CI 0.95 to .84; P value = 0.1; I(2) = 98%).Fourteen studies compared acupuncture with a variety of other non-surgical treatments, such as Chinese drug patches, hot and cold water, ice packs, oral Chinese herbal medicine and elastic bandage. Some studies found in favour of acupuncture, some in favour of the other treatment and some found a lack of evidence for a difference between the two interventions under test. The results of an exploratory meta-analysis of cure rate data from 11 trials testing acupuncture versus another non-surgical intervention tended to slightly favour acupuncture, but these were not statistically significant and the data were very heterogeneous (404/509 versus 416/497; RR 1.07, 95% CI 0.94 to 1.22; P value = 0.30; I(2) = 92%).
Authors' Conclusions	**The currently available evidence from a very heterogeneous group of randomised and 1 quasi-randomised controlled trials evaluating the effects of acupuncture for the treatment of acute ankle sprains does not provide reliable support for either the effectiveness or safety of acupuncture treatments, alone or in combination with other non-surgical interventions; or in comparison with other non-surgical interventions**. Future rigorous randomised clinical trials with larger sample sizes will be necessary to establish robust clinical evidence concerning the effectiveness and safety of acupuncture treatment for acute ankle sprains.

1.1.3. Park 2013 Ø

Park J, Hahn S, Park JY, Park HJ, Lee H. Acupuncture for ankle sprain: systematic review and meta-analysis. BMC Complement Altern Med. 2013;13(1):55. [167180].

Purpose	We therefore performed a systematic review to evaluate the evidence regarding acupuncture for ankle sprains.

Methods	We searched 15 data sources and two trial registries up to February 2012. Randomized controlled trials of acupuncture were included if they involved patients with ankle sprains and reported outcomes of symptom improvement, including pain. A Cochrane risk of bias assessment tool was used. Risk ratio (RR) or mean difference (MD) was calculated with 95% confidence intervals (CIs) in a random effects model. Subgroup analyses were performed based on acupuncture type, grade of sprain, and control type. Sensitivity analyses were also performed with respect to risk of bias, sample size, and outcomes reported.
Results	**Seventeen trials involving 1820 participants** were included. Trial quality was generally poor, with just three reporting adequate methods of randomization and only one a method of allocation concealment. **Significantly more participants in acupuncture groups reported global symptom improvement compared with no acupuncture groups (RR of symptoms persisting with acupuncture = 0.56, 95% CI 0.42–0.77)**. However, this is probably an overestimate due to the heterogeneity (I2 = 51%) and high risk of bias of the included studies. Acupuncture as an add-on treatment also improved global symptoms compared with other treatments only, without significant variability (RR 0.61, 95% CI 0.51–0.73, I2 = 1%). The benefit of acupuncture remained significant when the analysis was limited to two studies with a low risk of bias. **Acupuncture was more effective than various controls in relieving pain, facilitating return to normal activity, and promoting quality of life**, but these analyses were based on only a small number of studies. Acupuncture did not appear to be associated with adverse events.
Conclusion	Given methodological shortcomings and the small number of high-quality primary studies, the available evidence is insufficient to recommend acupuncture as an evidence-based treatment option.

1.2. Special Acupuncture Techniques

1.2.1. Ding 2019 (Combined with Traditional Chinese Medicine)

Ding Yuan-Tai, Di Na, Zhao Yi-Ping, Cheng Yue-Yue. [Treatment of ankle injury with acupuncture and moxibustion combined with traditional Chinese medicine: a Meta-analysis]. Journal of Lanzhou University(Medical Sciences). 2019;Issue 2:10-17+25. [201720].

Objective	A systematic evaluation of efficacy and safety of acupuncture and moxibustion combined with traditional Chinese medicine in the treatment of ankle injury.
Methods	A computer search of Cochrane Library, PubMed, Web of Science, Chinese Biomedical Literature Database, China Knowledge Network Infrastructure, Wanfang Database, Weipu Database including acupuncture and moxibustion combined with traditional Chinese medicinal external application treatment of Chinese ankle injury patients in the randomized control group. The bias risk and quality of each participant were assessed in accordance with Cochrane standards. Stata14.0 software was used for the statistical system evaluation and analysis.
Results	**A total of 821 patients were included in 8 studies**. The meta-analysis revealed that the heterogeneity of the included literature was $\chi^2 = 3.75$(df = 7), P = 0.81, $I^2 = 0\%$, and the heterogeneity between the literatures was relatively small. The cure rate was(OR = 2.85, 95% CI: [2.07, 3.94], P < 0.01), callus rate(OR = 3.46 > 1, 95%CI: [2.36, 5.06], P < 0.001), effective rate(OR= 0.48 < 1, 95% CI: [0.31, 0.74], P > 0.05) and total effective rate(OR = 4.99, 95% CI: [2.66, 9.36], P <0.01), and the differences were statistically significant. But the excellence rate was(OR = 0.87, 95% CI: [0.62, 1.35], P > 0.05) and 95% CI had invalid line(OR = 1), making the difference not statistically significant(P > 0.05).

Conclusion	The curative rate of acupuncture and moxibustion combined with traditional Chinese medicine in the treatment of ankle joint injury was high. The total effective rate was obvious, the effective rate in the treatment difference was small, the obvious efficiency effect was not obvious.

2. Overviews of Systematic Reviews

2.1. Doherty 2017 Ø

Doherty C, Bleakley C, Delahunt E, Holden S. Treatment and prevention of acute and recurrent ankle sprain: an overview of systematic reviews with meta-analysis Br J Sports Med. 2017;51(2):113-25. [175708].

Objectives	Ankle sprains are highly prevalent with high risk of recurrence. Consequently, there are a significant number of research reports examining strategies for treating and preventing acute and recurrent sprains (otherwise known as chronic ankle instability (CAI)), with a coinciding proliferation of review articles summarising these reports. Objective To provide a systematic overview of the systematic reviews evaluating treatment strategies for acute ankle sprain and CAI.
Methods	Overview of intervention systematic reviews. Participants Individuals with acute ankle sprain/CAI.
Results	The primary outcomes were injury/reinjury incidence and function. Results 46 papers were included in this systematic review. The reviews had a mean score of 6.5/11 on the AMSTAR quality assessment tool. There was strong evidence for bracing and moderate evidence for neuromuscular training in preventing recurrence of an ankle sprain. For the combined outcomes of pain, swelling and function after an acute sprain, there was strong evidence for non-steroidal anti-inflammatory drugs and early mobilisation, with moderate evidence supporting exercise and manual therapy techniques. There was **conflicting evidence regarding the efficacy of surgery and acupuncture for the treatment of acute ankle sprains**. There was insufficient evidence to support the use of ultrasound in the treatment of acute ankle sprains.
Conclusions	For the treatment of acute ankle sprain, there is strong evidence for non-steroidal anti-inflammatory drugs and early mobilisation, with moderate evidence supporting exercise and manual therapy techniques, for pain, swelling and function. Exercise therapy and bracing are supported in the prevention of CAI.
acupuncture	[One] review (quality=9/11) concuded that acupuncture was likely to have a therapeutic effect in improving acute symptoms, but acknowlodged that the results were likely to be overestimated due to the low quality of the concluded studies

3. Clinical Practice Guidelines

⊕ positive recommendation (regardless of the level of evidence reported) Ø negative recommendation (or lack of evidence)

3.1. American Physical Therapy Association (APTA, USA) 2021 ⊕

Martin RL, Davenport TE, Fraser JJ, Sawdon-Bea J, Carcia CR, Carroll LA, Kivlan BR, Carreira D. Ankle Stability and Movement Coordination Impairments: Lateral Ankle Ligament Sprains Revision 2021. J Orthop Sports Phys Ther. 2021;51(4):CPG1-CPG80. [207937]. doi

There is conflicting evidence regarding the use of acupuncture to reduce symptoms associated with an acute LAS.
Tertiary Prevention (chronic) : **may do acupuncture and trigger point dry needling**.

3.2. Royal Dutch Society for Physical Therapy (The Netherlands) 2018 Ø

Vuurberg G, Hoorntje A, Wink LM, et al. Diagnosis, treatment and prevention of ankle sprains: update of an evidence-based clinical guideline. Br J Sports Med. 2018;52(15):956. [141507]. doi

Recommendation : [Other therapies, including acupuncture] As no strong evidence exists on the effectiveness of these treatment modalities, they are not advised in the treatment of acute LAS (level 2).

Reviews included :

- Kim Th, Lee Ms, Kim Kh, Kang Jw, Choi Ty , Ernst E. Acupuncture for treating acute ankle sprains in adults. Cochrane Database Syst Rev. 2014;(6):CD009065. [183395].
- Park J, Hahn S, Park JY, Park HJ, Lee H. Acupuncture for ankle sprain: systematic review and meta-analysis. BMC Complement Altern Med. 2013;13(1):55. [167180].

3.3. Korean Institute of Oriental Medicine and Korean Acupuncture and Moxibustion Medicine Society (KAMMS, Korea) 2017 ⊕

Choi Jiae, Ji Hee Jun, Jong Uk Kim, Tae-Young Choi, Ju Ah Lee, Tae Han Yook, Tae Hun Kim, Myeong Soo Lee. Korean medicine clinical practice guideline on acupuncture for acute ankle sprains in adults: Evidence-based approach. European Journal of Integrative Medicine. 2017;12:182-8. [198229].

Acupuncture treatment is recommended to mitigate acute ankle sprain symptoms in adults. recommendation grade A/ level of evidence Moderate.
Acupuncture should be considered instead of conventional nonsurgical treatment for acute ankle sprain in adults. B/Moderate
Instead of only conventional non-surgical treatment for acute ankle sprain in adults, conventional non-surgical treatment combined with acupuncture should be considered. B/Moderate

Reviews included:

- Park J, Hahn S, Park JY, Park HJ, Lee H. Acupuncture for ankle sprain: systematic review and meta-analysis. BMC Complement Altern Med. 2013;13(1):55. [167180].

3.4. American College of Occupational and Environmental Medicine (ACOEM, USA) 2015 Ø

Ankle and Foot Disorders. American College of Occupational and Environmental Medicine. 2015. 453P. [180844].

Recommendation: Acupuncture for Acute, Subacute, or Chronic Ankle Sprain. There is no recommendation for or against the use of acupuncture for treatment of acute, subacute, or chronic ankle sprain.Strength of Evidence - No Recommendation, Insufficient Evidence (I). Level of Confidence – Low

3.5. American College of Occupational and Environmental Medicine (ACOEM, 2011) Ø

American College of Occupational and Environmental Medicine (ACOEM). Ankle and foot disorder. Elk Grove Village (IL): American College of Occupational and Environmental Medicine (ACOEM). 2011;68P. [166016].

No recommendation : Acupuncture (I)

3.6. Accident Compensation Corporation (ACC, New-Zealand) 2011 Ø

Hardaker N, Ayson M. Pragmatic Evidence Based Review. The efficacy of acupuncture in the management of musculoskeletal pain. Accident Compensation Corporation (ACC, New-Zealand). 2011. [182414].

There is no evidence to recommend the use of acupuncture for ankle pain