Table des matières

nonalcoholic fatty liver disease

Stéatose hépatique : évaluation de l'acupuncture

1. Systematic Reviews and Meta-Analysis

1.1. Generic Acupuncture

1.1.1. Liu 2025

Liu C, Ao Y, Liu B, Huang J, Wang Q, Ao X, Wang X, Ban X. The safety and efficacy of acupuncture in treating nonalcoholic fatty liver disease: a systematic review and meta-analysis based on randomized controlled trials. Medicine (Baltimore). 2025 May 2;104(18):e42272. https://doi.org/10.1097/MD.0000000000042272

Background	Nonalcoholic fatty liver disease (NAFLD) is the most prevalent chronic liver disorder worldwide. Acupuncture has been increasingly applied for NAFLD management, yet the evidence supporting its efficacy and safety remains inconclusive. This meta-analysis aimed to comprehensively assess the therapeutic effects and safety of acupuncture in NAFLD.
Methods	Randomized controlled trials (RCTs) evaluating acupuncture for NAFLD were searched across six databases from inception to February 28, 2024. Studies meeting predefined eligibility criteria were included. Data were analyzed using Review Manager 5.4 and Stata 15.1.
Results	**Thirty RCTs** were included. Acupuncture significantly improved the overall clinical effectiveness rate compared with controls (OR = 3.36, 95 % CI 2.62–4.31, p < .00001; I^2 = 0%). It enhanced liver function, reduced blood lipids and glucose, improved insulin regulation, attenuated liver fibrosis, and yielded favorable imaging outcomes. Subgroup analysis showed acupoint embedding (OR = 3.14, 95 % CI 2.11–4.62), manual acupuncture (OR = 3.27, 95 % CI 2.19–4.90), and electroacupuncture (OR = 3.32, 95 % CI 1.69–6.52) as most effective modalities, while acupoint injection (OR = 5.74, 95 % CI 2.23–14.88) showed modest lipid-lowering effects. No serious adverse reactions were reported.
Conclusion	Acupuncture appears to be a safe and effective intervention for NAFLD, improving hepatic function, glucose and lipid metabolism, and reducing fibrosis. Confirmation through large, well-designed RCTs is warranted to strengthen clinical recommendations.

1.1.2. Bi 2021

Bi Y, Yin B, Fan G, Xia Y, Huang J, Li A, Lin Y. Effects of acupoint therapy on nonalcoholic fatty liver disease: A systematic review and meta-analysis. Complement Ther Clin Pract. 2021. [218679]. doi

Background	and purpose: Acupoint therapy is suggested as a potential intervention for treating nonalcoholic fatty liver disease (NAFLD). This review assessed current evidence for the effect of acupoint therapy on NAFLD.
Methods	Eight electronic databases were searched to identify randomized controlled trials (RCTs) of patients with NAFLD treated by acupoint therapy from their inception to August 2020. A meta-analysis of outcomes was conducted by RevMan 5.3.
Results	Sixteen RCTs with 1320 patients were included. Acupoint therapy was significantly associated with improvements in alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels. Additionally, acupoint therapy significantly reduced triglyceride (TG), total cholesterol (TC) and low-density lipoprotein (LDL) levels. High-density lipoprotein (HDL) levels were also increased in NAFLD patients.
Conclusion	Compared with other treatments, acupoint therapy may improve liver function and lipid metabolism, making it an available treatment for NAFLD. However, these findings need to be confirmed in large-scale, rigorously designed RCTs.

1.1.3. Chen 2021

Chen P, Zhong X, Dai Y, Tan M, Zhang G, Ke X, Huang K, Zhou Z. The efficacy and safety of acupuncture in nonalcoholic fatty liver disease: A systematic review and meta-analysis of randomized controlled trials. Medicine (Baltimore). 2021;100(38). [221796].
https://doi.org/10.1097/md.0000000000027050

Background	The aim of this study was to determine the efficacy and safety of acupuncture treatment (AT) or acupuncture plus conventional medicine (CM) versus CM alone using a meta-analysis of all published randomized controlled trials (RCTs) for nonalcoholic fatty liver disease (NAFLD).
Methods	Eight databases were searched independently from inception to April 30, 2020. RCTs were included if they contained reports on the use acupuncture or the use of acupuncture combined with CM and compared with the use of CM. Summary odds ratio (OR) and 95% confidence intervals (CIs) were used to calculate the overall clinical efficacy. Secondary outcomes, namely aspartate aminotransferase, alanine aminotransferase, total cholesterol, triglyceride, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, and body mass index, were calculated by mean difference with 95% CIs.
Results	After the final screening, **8 RCTs with 939 patients** were included. This meta-analysis showed that AT was superior to CM in improving overall clinical efficacy (OR = 3.19, 95% CI: 2.06-4.92, P < .00001). In addition, AT plus CM could significantly improve overall clinical efficacy compared to treatment with CM alone (OR = 5.11, 95% CI: 2.43-10.75, P < .0001). Moreover, the benefits were also demonstrated in other outcomes, including alanine aminotransferase, aspartate aminotransferase, total cholesterol, triglyceride, high-density lipoprotein cholesterol, and low-density lipoprotein cholesterol indexes. However, AT plus CM could not decrease body mass index levels in comparison with CM. The safety profile of Acupuncture therapy was satisfactory. Taichong, Zusanli, Fenglong, and Sanyinjiao were major acupoints on NAFLD treatment.
Conclusion	Acupuncture may be effective and safe for treatment of NAFLD. However, due to insufficient methodological quality and sample size, further high-quality studies are needed.

1.2. Special Acupuncture Techniques

1.2.1. Catgut Embedding

1.2.1.1. Dai 2020

Dai L, Ooi VV, Zhou W, Ji G. Acupoint embedding therapy improves nonalcoholic fatty liver disease with abnormal transaminase: A PRISMA-compliant systematic review and meta-analysis. Medicine (Baltimore). 2020;99(3). [205222]. DOI

Background	Non-alcoholic fatty liver disease (NAFLD) with abnormal transaminase were main targeted disorder in clinical intervention. Acupuncture embedding has been used as a modified acupuncture therapy in current management, while no comprehensive summarization has been established. Hence, we conducted a systematic review and meta-analysis to evaluate the effectiveness and safety of acupoint embedding alone or in combination for NAFLD with abnormal transaminase, and to provide potential regimen for further verification.
Methods	Seven English and Chinese databases were systematically researched from inception to February 28, 2019, including PubMed, Embase, Cochrane Central Register of Controlled Trials (CENTRAL), Chinese biomedical literature database (SinoMed), Chinese National Knowledge Infrastructure (CNKI), Chinese VIP information (VIP), and WanFang database. Academic dissertations were also searched as supplement. The searching terms included “nonalcoholic fatty liver disease,” “acupoint embedding,” “clinical trial,” with their corresponding synonyms. Randomized controlled trials (RCTs) and quasi-RCTs involving acupoint embedding alone or in combination for adult patients with NAFLD with abnormal transaminase were included. The diagnosis of NAFLD should be confirmed by radiologic evidence. Two researchers independently completed predefined data sets extraction and quality assessment. STATA 15.0 was applied to estimate the combined effect presented as odds ratio or mean difference (MD) with a 95% confidence interval (CI). The primary outcome was the change of serum alanine aminotransferase (ALT).
Results	A total of **fifteen studies with 1349 patients** were included. Meta-analysis reported that acupoint embedding alone or in combination was superior to conventional medications on ALT change (MD: 16.58, 95%CI: [10.42, 22.74], P < .001). The benefits were also demonstrated in other outcomes, including aspartate aminotransferase, triglyceride, and total cholesterol, total efficacy rate and radiological efficacy rate. The safety profile of acupoint embedding was satisfactory. BL18 (Ganshu) was the most frequently utilized acupoint.
Conclusion	To some extent, the systematic review supported the application of acupoint embedding in management of NAFLD, while further high-quality studies should be designed to evaluate the practical effect of acupoint embedding.