EBM journal club
針灸治療失眠有效嗎?

報告時間：2012.09.10

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指導醫師：陳星諭醫師

Outline

- Background knowledge
- Ask an answerable question
- Searching for the best available evidence
- Critical appraisal
- Apply to your patient

BACKGROUND KNOWLEDGE

Insomnia

Definition

- Difficulty initiating sleep, difficulty maintaining sleep, waking up too early, chronically nonrestorative sleep, or poor quality sleep
- The sleep difficulty occurs despite adequate opportunity and circumstances for sleep
- There are related daytime complaints

Overview of insomnia ,UpToDate

Insomnia

Risk factor

- The prevalence of insomnia increases with age.
- **Adult women** report insomnia about 50 percent more often than men .
- There is also a higher prevalence of insomnia among persons who are unemployed, divorced, widowed, separated, or of lower socioeconomic status.

Overview of insomnia ,UpToDate

Insomnia

Treatment

- Behavioral and cognitive-behavioral therapies (CBTs)
- Benzodiazepine Receptor Agonists
- Antidepressants*
- Antipsychotics*
- Alternative and Complementary Therapies

*Not FDA approved for treatment of insomnia
NIH Statement. Sleep. 2005;28:1049-1057

Five Steps to Practice EBM

- Asking an answerable question 提出問題
- Tracking down the best evidence 資料蒐尋
- Critical appraisal 文獻評讀
- Integrating the appraisal with clinical expertise and patients' preference 臨床應用
- Evaluation the effectiveness and efficiency 評估改善

ASK AN ANSWERABLE QUESTION

Scenario

- 針灸治療失眠有效嗎?

Ask

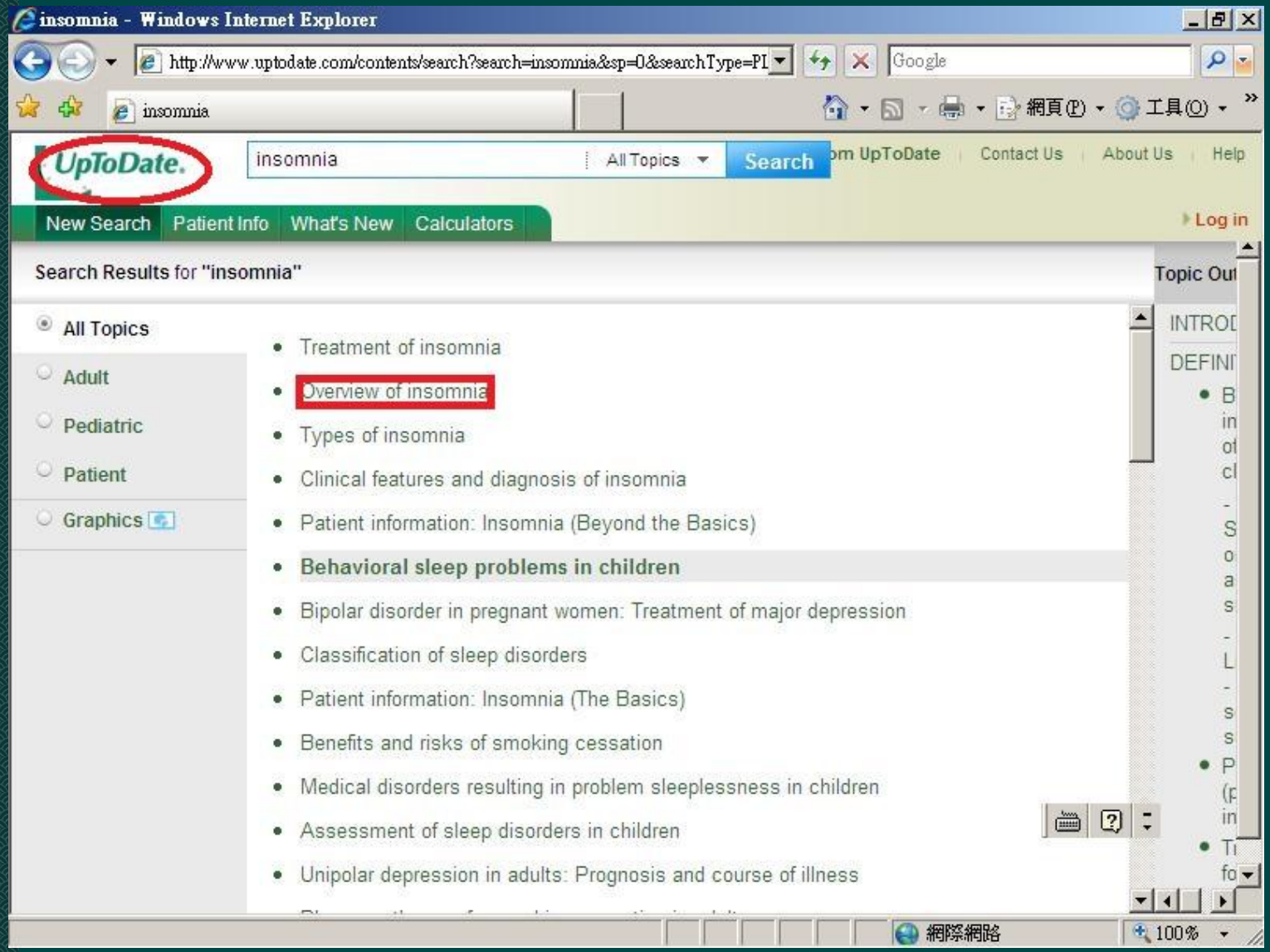
- Problem ：Insomnia
- Intervention ： Accupuncture
- Comparison ： sham/western medicine
- Outcome：Efficacy

SEARCHING FOR THE BEST AVAILABLE EVIDENCE

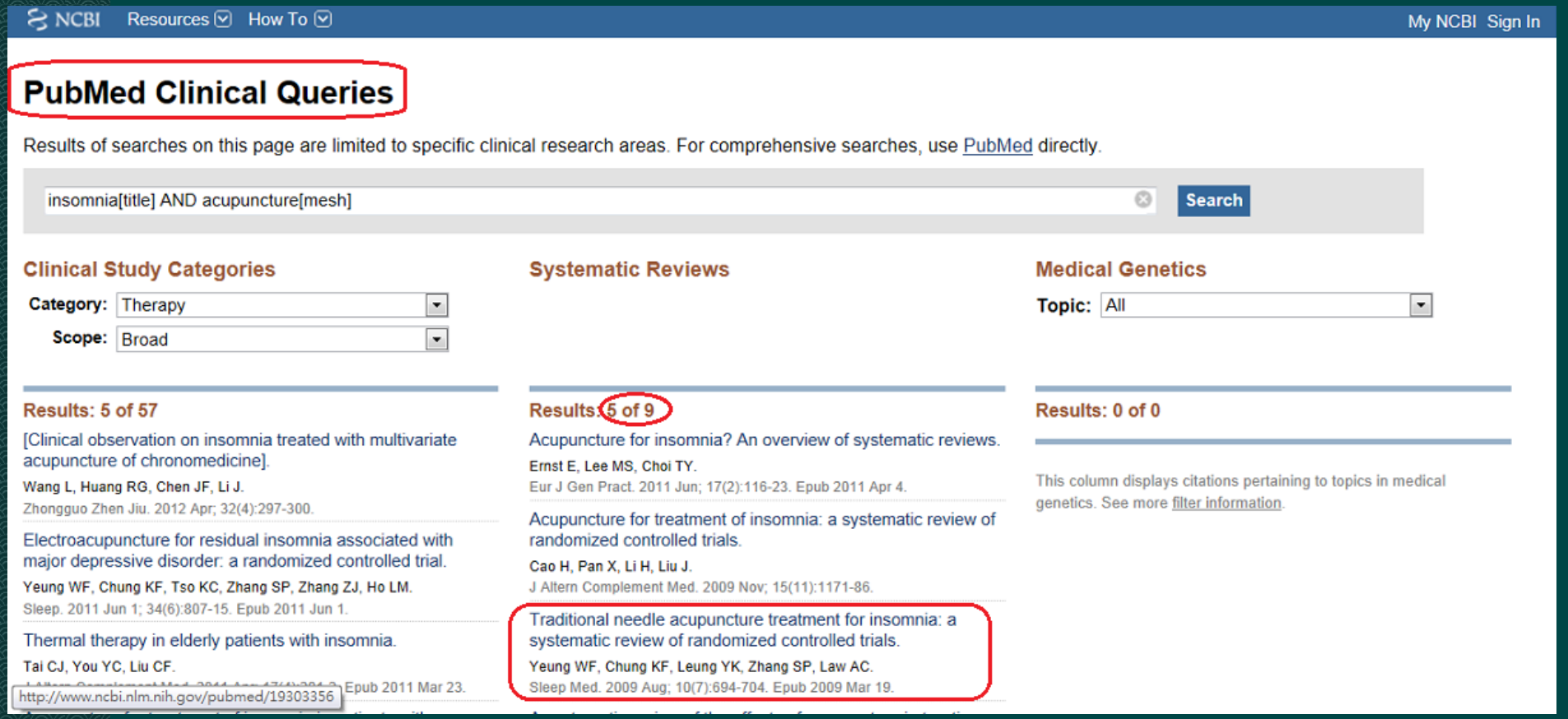
ACCESSING

- Key words
  - Insomnia
  - Acupuncpure
  - Systematic review
- Data base
  - UpToDate Online
  - PubMed

搜尋歷程 UpToDate Online



搜尋歷程 PubMed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insomnia[title] AND acupuncture[mesh]
Search
Clinical Study Categories
Category: Therapy
Scope: Broad
Systematic Reviews
Medical Genetics
Topic: All
Results: 5 of 57
[Clinical observation on insomnia treated with multivariate acupuncture of chronomedicine].
Wang L, Huang RG, Chen JF, Li J.
Zhongguo Zhen Jiu. 2012 Apr; 32(4):297-300.
Electroacupuncture for residual insomnia associated with major depressive disorder: a randomized controlled trial.
Yeung WF, Chung KF, Tso KC, Zhang SP, Zhang ZJ, Ho LM.
Sleep. 2011 Jun 1; 34(6):807-15. Epub 2011 Jun 1.
Thermal therapy in elderly patients with insomnia.
Tai CJ, You YC, Liu CF.
Epub 2011 Mar 23.
http://www.ncbi.nlm.nih.gov/pubmed/19303356
Results: 5 of 9
Acupuncture for insomnia? An overview of systematic reviews.
Ernst E, Lee MS, Choi TY.
Eur J Gen Pract. 2011 Jun; 17(2):116-23. Epub 2011 Apr 4.
Acupuncture for treatment of insomnia: a systematic review of randomized controlled trials.
Cao H, Pan X, Li H, Liu J.
J Altern Complement Med. 2009 Nov; 15(11):1171-86.
Traditional needle acupuncture treatment for insomnia: a systematic review of randomized controlled trials.
Yeung WF, Chung KF, Leung YK, Zhang SP, Law AC.
Sleep Med. 2009 Aug; 10(7):694-704. Epub 2009 Mar 19.
Results: 0 of 0
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Sleep Medicine 10 (2009) 694–704

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Review Article

Traditional needle acupuncture treatment for insomnia: A systematic review of randomized controlled trials

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CRITICAL APPRAISAL

F - Is it unlikely that important, relevant studies were missed?	
What is best?	Where do I find the information?
The starting point for comprehensive search for all relevant studies is the major bibliographic databases (e.g., Medline, Cochrane, EMBASE, etc) but should also include a search of reference lists from relevant studies, and contact with experts, particularly to inquire about unpublished studies. The search should not be limited to English language only. The search strategy should include both MESH terms and text words.	The *Methods* section should describe the search strategy, including the terms used, in some detail. The *Results* section will outline the number of titles and abstracts reviewed, the number of full-text studies retrieved, and the number of studies excluded together with the reasons for exclusion. This information may be presented in a figure or flow chart.
This paper: Yes ■ No □ Unclear □ **Comment:**	

2. Methods

We searched MEDLINE (1966–2006), EMBASE (1980–2006), Cochrane Central Register of Controlled Trials (1997–2006) PsycINFO (1887–2006), Dissertation Abstracts International (1861–2006), Cumulative Index to Nursing and Allied Health Literature (CINAHL) (1982–2006), and Allied and Complementary Medicine (AMED) (1985–2006) in September 2006 using the grouped terms (acupuncture*, acupunc*, meridian* or acupoint*) and (sleep*, insomnia*, wakeful* or sleepless*). The search included Chinese Scientific Journal Database (1989–2006), WangFang Data (1994–2006), China Journal Net (1994–2006), and China Proceedings of Conference Database (1994–2006) using equivalent Chinese terms that were used in searching the English language databases. The Chinese Scientific Journal Database was one of the major Chinese

Step 1:
Are the results of the study valid?

A - Were the criteria used to select articles for inclusion appropriate?	
What is best?	Where do I find the information?
The inclusion or exclusion of studies in a systematic review should be clearly defined a priori. The eligibility criteria used should specify the patients, interventions or exposures and outcomes of interest. In many cases the type of study design will also be a key component of the eligibility criteria.	The ***Methods*** section should describe in detail the inclusion and exclusion criteria. Normally, this will include the study design.
This paper: Yes ■ No □ Unclear □ **Comment:**	

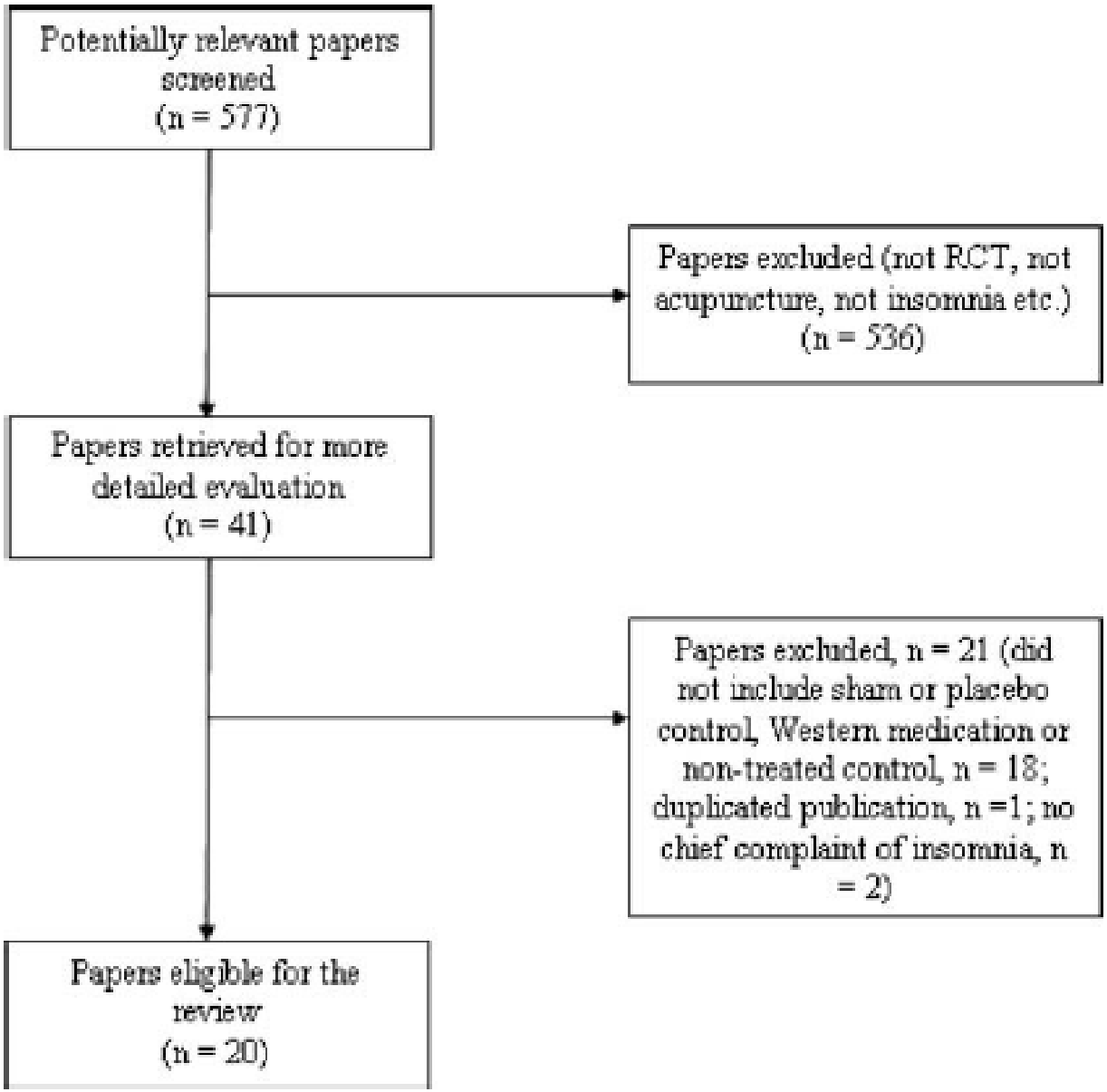


Fig. 1. Selection of trials for inclusion in the review.

A - Were the included studies sufficiently valid for the type of question asked?	
What is best?	Where do I find the information?
The article should describe how the quality of each study was assessed using predetermined quality criteria appropriate to the type of clinical question (e.g., randomization, blinding and completeness of follow-up)	The ***Methods*** section should describe the assessment of quality and the criteria used. The ***Results*** section should provide information on the quality of the individual studies.
This paper: Yes ■ No □ Unclear □ **Comment:**	

ABSTRACT

Objectives: Previous reviews regarding traditional needle acupuncture (TNA) treatment for insomnia were limited to English scientific literature. A comprehensive review including Chinese and English literature has therefore been conducted to examine the efficacy of TNA for insomnia.

Methods: We performed systematic review of randomized controlled trials (RCTs) of TNA as intervention for insomnia against placebo, Western medication, and non-treated controls. The methodological quality of the studies was assessed by the modified Jadad score and the acupuncture procedure was appraised by the STRICTA criteria.

Results: Twenty RCTs were identified for detailed analysis. Majority of the RCTs concluded that TNA was significantly more effective than benzodiazepines for treating insomnia, with mean effective rates for acupuncture and benzodiazepines being 91% and 75%, respectively. In two more appropriately conducted trials, TNA appeared to be more efficacious in improving sleep than sleep hygiene counseling and sham acupuncture. Standardized and individualized acupuncture had similar effective rates. Despite these positive outcomes, there were methodological shortcomings in the studies reviewed, including imprecise diagnostic procedure, problems with randomization, blinding issues, and insufficient safety data. Hence, the superior efficacy of TNA over other treatments could not be ascertained.

Conclusion: Since the majority of evidence regarding TNA for insomnia is based on studies with poor-quality research designs, the data, while somewhat promising, do not allow a clear conclusion on the benefits of TNA for insomnia. Moreover, the results support the need for large scale placebo-controlled double-blinded trials.

T - Were the results similar from study to study?	
What is best?	Where do I find the information?
Ideally, the results of the different studies should be similar or homogeneous. If heterogeneity exists the authors may estimate whether the differences are significant (chi-square test). Possible reasons for the heterogeneity should be explored.	The ***Results*** section should state whether the results are heterogeneous and discuss possible reasons. The forest plot should show the results of the chi-square test for heterogeneity and if discuss reasons for heterogeneity, if present.
This paper: Yes ☐ No ■ Unclear ☐ **Comment:**	

Table 1
Randomized controlled trials of traditional needle acupuncture for insomnia.

No.	Author (year)	Country/type of case	Mean age, yrs (range) /% female	Duration of insomnia	Diagnostic system	Design	Follow-up	Sample size (Acup/control)	Control intervention	Outcome measure	Results reported
1	da Silva et al. (2005)	Brazil/women of <30 weeks pregnancy attending an antenatal clinic	26.5 (15–39)/100%	Onset after pregnancy	Self-report	2-parallel arms (Acup; Sleep hygiene)	Nil	30 (17/13)	Sleep hygiene	Numerical rating scale	Acup significantly > sleep hygiene
2	Ding (2006)	China/outpatients, speciality NR	NR (13–75)/48.3%	4 days–13 years	Self-report	2-parallel arms (Acup; Benzo)	Nil	116 (84/32)	Diazepam 5 mg/day	Effective rate	Acup significantly > Benzo
3	Fan et al. (2006)	China/inpatients, speciality NR	36.5 (19–65)/57.4%	6 months–5 years	CCMD	2-parallel arms (Acup; Benzo)	Nil	68 (40/28)	Diazepam 5 mg/day	Effective rate	Acup significantly > Benzo
4	Hou et al. (2005)	China/type of case NR	NR (17–63)/54.2%	15 days–10 years	CRG	2-parallel arms (Acup; Benzo)	Nil	190 (150/40)	Estazolam 1 mg/day	Effective rate	Acup significantly > Benzo
5	Kim et al. (2004)	Korea/stroke inpatients	66.7 (NR)/43.3%	NR	Self-report; ISI > 15	2-parallel arms (Acup; Sham Acup)	Nil	32 (16/16)	Non-invasive sham acupuncture	MQ, ISI, AIS, VAS	Significant improvement in MQ, ISI and AIS score from baseline in Acup. Improvement of ISI and AIS for Acup significantly > Sham Acup
6	Li et al. (2007)	China/outpatients, speciality NR	NR (17–63)/65.0%	20 days–28 years	CRG	2-parallel arms	Nil	80 (40/40)	Diazepam 2.5 mg/day	Effective rate	Acup significantly > Benzo
7	Liu et al. (2007)	China/type of case NR	48.6 (NR)/56.9%	Mean 17.5 years	CCMD	2-parallel arms	Nil	160 (80/80)	Clonazepam 4 mg/day	Effective rate, PSQI	Both Acup and Benzo show significant improvement in effective rate and PSQI score. No significant difference between Acup and Benzo after treatment.
8	Ma et al. (2006)	China/outpatients, speciality NR	43.6 (17–72)/56.5%	3 months–12 years	CCMD	2-parallel arms (Acup; Benzo)	Nil	62 (31/31)	Clonazepam 2 mg/day	Effective rate, SDRS, SSDS, HAMA	Significant improvement in SDRS, SSDS, HAMA score from baseline in Acup. Improvement in SDRS, SSDS, HAMA for Acup significantly > Benzo
9	Pan et al. (2006)	China/outpatients in rehabilitation center	NR (15–70)/62.5%	2 months–30 years	CCMD	2-parallel arms (Acup; Benzo)	Nil	112 (56/56)	Estazolam 1 mg/day	Effective rate	Acup significantly > Benzo
10	Sang et al. (2004)	China/inpatients, speciality NR	NR (18–67)/NR	3 weeks–5years	TCM-D	2-parallel arms (Acup; Benzo)	Nil	40 (20/20)	Diazepam dose NR	Effective rate	Acup significantly > Benzo
11	Su et al. (2004)	China/outpatients with spondylosis	NR (18–55)/72.3%	1 month–5 years	TCM-D	2-parallel arms (Acup; Benzo)	1-week	166 (90/76)	Estazolam dose NR	Effective rate	Both Acup and Benzo show significant improvement in effective rate. No significant difference between Acup and Benzo immediately after treatment. Acup significantly > Benzo at 1-week follow-up
12	Wang et al. (2003)	China/type of case NR	NR (19–38)/64.3%	10 days–19 years	CCMD	2-parallel arms (Acup; Benzo)	Nil	115 (60/55)	Diazepam 5 mg/day	Effective rate	Acup significantly > Benzo
13	Wei et al. (2006)	China/inpatients and outpatients, speciality NR	48.0 (20–69)/53.6%	6 months–10 years	TCM-D	2-parallel arms (Acup; Benzo)	Nil	56 (30/26)	Diazepam 10 mg/day	Effective rate	Acup significantly > Benzo
14	Weng et al. (2007)	China/outpatients speciality NR	70.7 (65–70)/51.3%	NR	CCMD	3-parallel arms (Acup; Benzo; Acup + Benzo)	Nil	78 (26/26/26)	Estazolam 1 mg/day	PSQI, AIS	PSQI and AIS total score in Acup significantly > Benzo; Acup + Benzo significantly > Benzo in; no significantly difference in PSQI and AIS score between Acup and Acup + Benzo
15	Xiong et al. (2003)	China/outpatients, speciality NR	47.1 (17–76)/46.4%	2 months–30 years	CRG	2-parallel arms (Acup; Benzo)	Nil	84 (45/39)	Estazolam 1–2 mg/day	Effective rate	Acup significantly > Benzo

(continued on next page)

Table 1 (*continued*)

No.	Author (year)	Country/type of case	Mean age, yrs (range) /% female	Duration of insomnia	Diagnostic system	Design	Follow-up	Sample size (Acup/ control)	Control intervention	Outcome measure	Results reported
16	Xuan et al. (2007)	China/outpatients, sleep clinic	49.0 (NR)/54.3%	NR, at least 4 weeks	ICD-10	2-parallel arms (Acup; Benzo)	Nil	46 (24/22)	Estazolam 1 mg/day	Effective rate, PSQI	Acup significantly > Benzo in effective rate and PQSI change score in total sleep time, sleep dysfunction and daytime functioning
17	Zhang et al. (2003)	China/inpatients, specialty NR	NR (16–62)/39.4%	1 month–12 years	CCMD	2-parallel arms (Acup; Benzo)	Nil	132 (87/45)	Clonazepam 2 mg/day	Effective rate, SRSS, PSG	No significant difference in effective rate and SRSS change score between Acup and Benzo. No statistical analysis on PSG data
18	Zhang (2005)	China/inpatients, specialty NR	40.5 (23–70)/ 73.3%	10 days–8 years	Self-report	2-parallel arms (Acup; Benzo)	Nil	90 (45/45)	Estazolam 2 mg/day	Effective rate	Acup significantly > Benzo
19	Zhu (2002)	China/type of case NR	NR (24–75)/3.8%	3 months–15 years	TCM-D	3-parallel arms (Qiao-acup; Acup; Benzo)	Nil	260 (120/80/60)	Diazepam 5–10 mg/ day	Effective rate	Qiao-Acup significantly > Benzo; no significant difference between Acup and Benzo
20	Zou (2008)	China/outpatients, acupuncture clinic	NR (18–65)/50.8%	2 weeks–8 years	TCM-D	2-parallel arms (Acup; Benzo)	Nil	118 (60/58)	Alprazolam 0.4 mg/day	Effective rate	Acup significantly > Benzo

Acup, acupuncture group; AIS, Athens insomnia scale; Benzo, benzodiazepine; CCMD, Chinese Classification of Mental Disorder; CRG, Clinical Research Guidelines of New Chinese herbal Medicine; HAMA, Hamilton anxiety rating scale; ICD-10, International Classification of Diseases 10th Revision; ISI, insomnia severity index, MQ, morning questionnaire; NR, not reported; PSG, polysomnography; PSQI, Pittsburgh sleep quality index; Qiao-acup, acupuncture on Qiao-meridian; SDRS, sleep disorder rating scale; Sham acup, sham acupuncture; SSDS, self-rated sleep disorder scale; SRSS, self-rating scale of sleeping; TCM-D, diagnosis based on TCM textbooks; VAS, visual analog scale.

Modified Jadad scores for RCTs of traditional needle acupuncture for insomnia.

No.	Author (year)	Described as randomized	Appropriate randomization method described	Subject blinded to intervention	Evaluator blinded to intervention	Description of withdrawals and dropouts	Total
1	da Silva et al. (2005)	1	1	0	0	1	3
2	Ding (2006)	1	0	0	0	0	1
3	Fan et al. (2006)	1	1	0	0	0	2
4	Hou et al. (2005)	1	0	0	0	0	1
5	Kim et al. (2004)	1	1	1	1	1	5
6	Li et al. (2007)	1	0	0	0	0	1
7	Liu et al. (2007)	1	1	0	0	0	2
8	Ma et al. (2006)	1	0	0	0	0	1
9	Pan et al. (2006)	1	0	0	0	0	1
10	Sang et al. (2004)	1	1	0	0	0	2
11	Su et al. (2005)	1	0	0	0	0	1
12	Wang et al. (2003)	1	0	0	0	0	1
13	Wei et al. (2006)	1	1	0	0	0	2
14	Weng et al. (2007)	1	0	0	0	0	1
15	Xiong et al. (2003)	1	0	0	0	0	1
16	Xuan et al. (2007)	1	1	0	0	0	2
17	Zhang et al. (2003)	1	1	0	0	0	2
18	Zhang (2005)	1	0	0	0	0	1
19	Zhu (2002)	1	0	0	0	0	1
20	Zou (2008)	1	1	0	0	0	2

0, not reported; 1, reported. A total modified Jadad score of 1–2, low quality trial; 3–5, high quality trial.

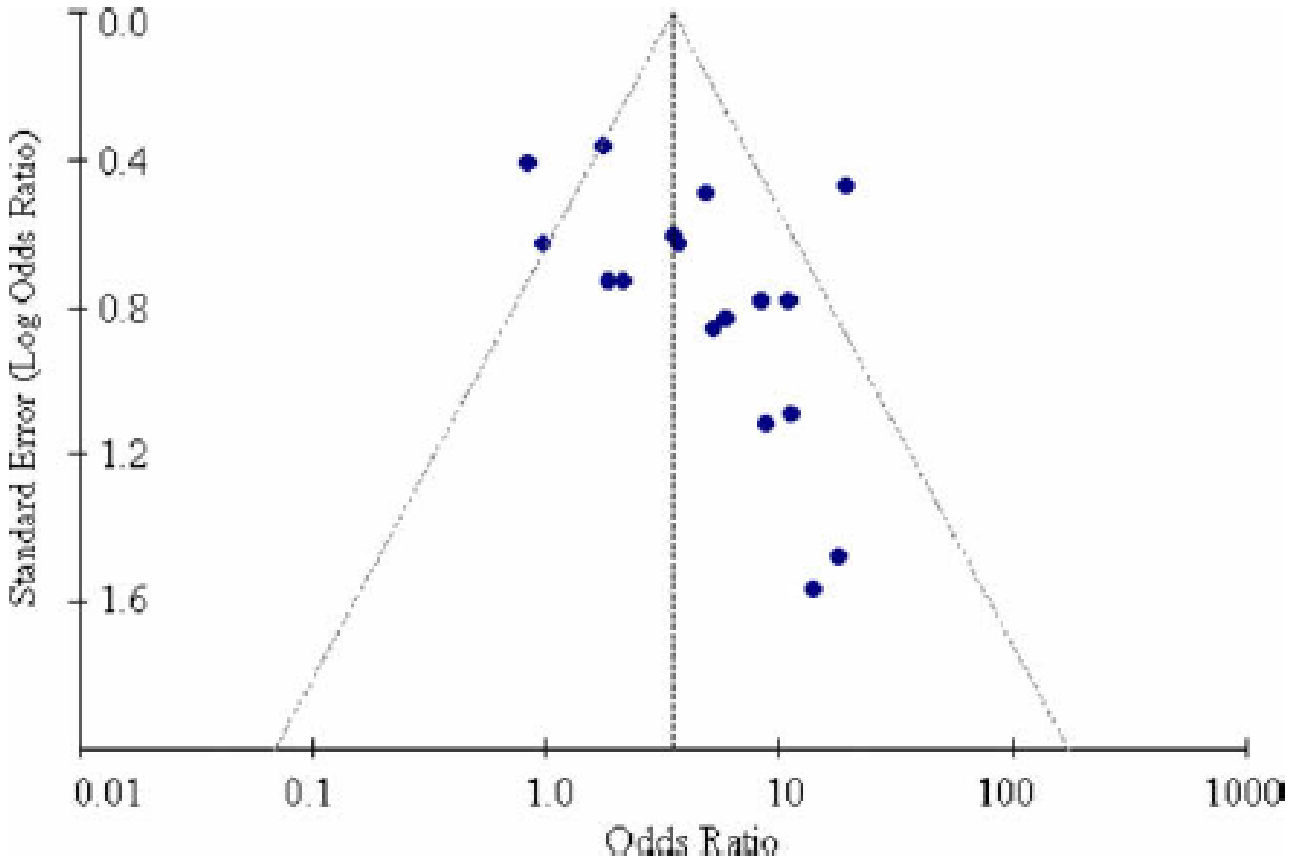


Fig. 2. Funnel plot for the included studies that used effective rate as outcome measure. The diagonal lines show the expected 95% confidence intervals around the summary estimate.

Table 3
Proportion of subjects improved and odds ratios (95% confidence interval) for RCTs of traditional needle acupuncture for insomnia.

No.[a]	Author (year)	Acup approach	Treatment group	*n* improved/total N	OR	95% CI
2	Ding (2006)	IND Acup	Acup	84/84		
			Benzo	30/32	13.85	0.65–296.76
3	Fan et al. 2006)	STD Acup	Acup	38/40		
			Benzo	22/28	5.18	0.96–27.92
4	Hou et al. (2005)	IND Acup	Acup	141/150		
			Benzo	18/40	19.15	7.68–47.94
6	Li et al. (2007)	STD Acup	Acup	40/40		
			Benzo	33/40	18.13	1.00–329.27
7	Liu et al. (2007)	STD Acup	Acup	64/80		
			Benzo	66/80	0.85	0.38–1.88
8	Ma et al. (2006)	IND Acup	Acup	29/31		
			Benzo	22/31	5.93	1.16–30.25
9	Pan et al. (2006)	STD Acup	Acup	49/56		
			Benzo	33/56	4.88	1.88–12.67
10	Sang et al. (2004)	STD Acup	Acup	16/20		
			Benzo	13/20	2.15	0.52–9.00
11	Su et al. (2004)	IND Acup	Acup	84/90		
			Benzo	71/76	0.99	0.29–3.37
			Acup	84/90		
			Benzo	50/76	7.28	2.80–18.90
12	Wang et al. (2003)	STD Acup	Acup	58/60		
			Benzo	40/55	10.88	2.36–50.19
13	Wei et al. (2006)	STD Acup	Acup	29/30		
			Benzo	20/26	8.7	0.97–77.92
15	Xiong et al. (2003)	IND Acup	Acup	44/45		
			Benzo	31/39	11.35	1.35–95.46
16	Xuan et al. (2007)	STD Acup	Acup	20/24		
			Benzo	16/22	1.88	0.45–7..80
17	Zhang et al. (2003)	IND Acup	Acup	82/87		
			Benzo	37/45	3.55	1.09–11.57
18	Zhang (2005)	IND Acup	Acup	41/45		
			Benzo	33/45	3.73	1.10–12.64
19	Zhu (2002)	IND Acup	Qiao-Acup	108/120		
			Acup	58/80	1.76 (Acup vs. Benzo)	0.86–3.58
			Benzo	36/60	6.00 (Qiao-acup vs. Benzo)	2.73–13.21
20	Zou (2008)	IND Acup	Acup	58/60		
			Benzo	45/58	8.39	1.80–39.03

[a] Same as the study number in Table 1. Benzo, benzodiazepine; IND Acup, individualized acupuncture; STD Acup, standardized acupuncture.

Table 4
Summary of traditional needle acupuncture treatment protocol.

No.	Author (year)	Acupuncture selection/needle stimulation	Treatment regimen	Main acupoints
1	da Silva et al. (2005)	Individualized/manual	8–12 sessions in 8 weeks	Shenmen (HT7), Neiguan (PC6), Jianjing (GB21) and Anmian bilaterally and Yintang (EX-HN3), Baihui (GV20) and Shanzhong (CV17)
2	Ding (2006)	Individualized/not reported	One per day, 7 days as a course, take 1–2 courses	Shenmen (HT7) and Sanyinjiao (SP6). No mention of unilateral or bilateral needle placement
3	Fan et al. (2006)	Standardized/manual	One per day, 10 days as a course, take a 1- or 2-day break then another course, 1–2 courses in total	Sishencong (EX-HN1), Shenmen (HT7) and Sanyinjiao (SP6) bilaterally
4	Hou et al. (2005)	Individualized/manual	One per day for 30 days	Baihui (GV20), Sishencong (EX-HN1), Neiguan (PC6), Shenmen (HT7), Anmian, Sanyinjiao (SP6), Taixi (KI3). No mention of unilateral or bilateral needle placement
5	Kim et al. (2004)	Standardized/no stimulation	2 whole days	Shenmen (HT7), Neiguan (PC6) bilaterally
6	Li et al. (2007)	Standardized/electric stimulation	One per day for 7–10 days	Anmian, Shenmen (HT7), Zhusanli (ST 36), Sanyinjiao (SP6), Zhaohai (KI6) bilaterally
7	Liu et al. (2007)	Standardized/no stimulation	One per day, 5 day as a course, take a 2-day break, 4 course in total	Along the frontal and lateral hairline, took every 2 cm apart as an acupoint, and also took the middle of the posterior hairline as another acupoint
8	Ma et al. (2006)	Individualized/manual and electric stimulation	One per day, 7 days as a course, take a 3-day break then another course, 3 courses in total	Shenting (GV24), Sishencong (EX-HN1), Benshen (GB13), Shenmen (HT7), Baihui (GV20). No mention of unilateral or bilateral needle placement
9	Pan et al. (2006)	Standardized/not reported	One per day, 7 days as a course, take a 2-day break then another course, 4 courses in total	Hegu (LI 4), Waiguan (SJ5), Houxi (SI 3), Yanglingquan (GB34), Taichong (LR3). No mention of unilateral or bilateral needle placement
10	Sang et al. (2004)	Standardized/manual	One per day for 20 days	Shenting (GV24), Qucha (HT18), Meichong (BL3), Toulinqi (GB15) bilaterally
11	Su et al. (2004)	Individualized/manual	One per day for 12 days	Neck Jiaji acupoints on both sides of cervical spondylosis segment
12	Wang et al. (2003)	Standardized/manual	One per day, 10 days as a course, treatment duration NR	Baihui (GV20), Sishencong (EX-HN1), Shenmen (HT7), Fengchi (GB20), Sanyinjiao (SP6), Zhaohai (KI6), Taixi (KI3). No mention of unilateral or bilateral needle placement
13	Wei et al. (2006)	Standardized/manual	One per day, 10 days as a course, take a 2-day break then another course, 3 courses in total	Shenshu (BL23), Pishu (BL20), Ganshu (BL18), Xinshu (BL15) bilaterally
14	Weng et al. (2007)	Standardized/electric stimulation	One per day 5 day per weeks for 4 weeks	Epangxian (MS2), Nieqianxian (MS10), Niehouxian (MS11) bilaterally; Ezhongxian (MS2), Dingzhongxian (MS5)
15	Xiong et al. (2003)	Individualized/manual	One per day for 3 weeks	Baihui (GV20), Yintang (EX-HN3), Shenmen (HT7), Sanyinjiao (SP6). No mention of unilateral or bilateral needle placement
16	Xuan et al. (2007)	Standardized/manual	One per day, 5 days as a course, take a 2-day break then another course, 2 courses in total	Baihui (GV20), Shenting (GV24), Shenmen (HT7), Sishencong (EX-HN1), and Sanyinjiao (SP6). No mention of unilateral or bilateral needle placement
17	Zhang et al. (2003)	Individualized/manual	One per day, 6 times per week for 4 weeks	Zhaohai (KI6), Jiaoxin (KI8), Jingming (BL1); Shenmai (BL62), Pucan (BL61), Fuyang (BL59), Jianliao (SJ14), Fengchi (GB20). No mention of unilateral or bilateral needle placement
18	Zhang (2005)	Individualized/manual	One per day, 10 days as a course and then take a 5-day break, 2 courses in total	Shenting (GV24), Neiguan (PC6), Fengchi (GB20). No mention of unilateral or bilateral needle placement
19	Zhu (2002)	Individualized/manual	One per day, 20 days as a course, treatment duration NR	Zhaohai (KI6), Shenmai (GB62). No mention of unilateral or bilateral needle placement
20	Zou (2008)	Individualized/manual and electric stimulation	One per day, 10 days as a course, take a 5-day break then another course, 2 course in total	Anmian, Shenmen (HT7), Sanyinjiao (SP6) bilaterally and Shenting (GV24), Baihui (GV20) unilaterally

BL, bladder meridian; CV, conception vessel; EX-HN, extra-ordinary acupoints; GB, gall bladder meridian; GV, governing vessel; HT, heart meridian; KI, kidney meridian; LI, large intestine meridian; LR, liver meridian; MS, motor sensory; PC, pericardium meridian; SI, small intestine meridian; SJ, Sanjiao meridian; SP, spleen meridian; ST, stomach meridian.

Table 5
Appraisal of traditional needle acupuncture treatment trials based on STRICTA criteria.

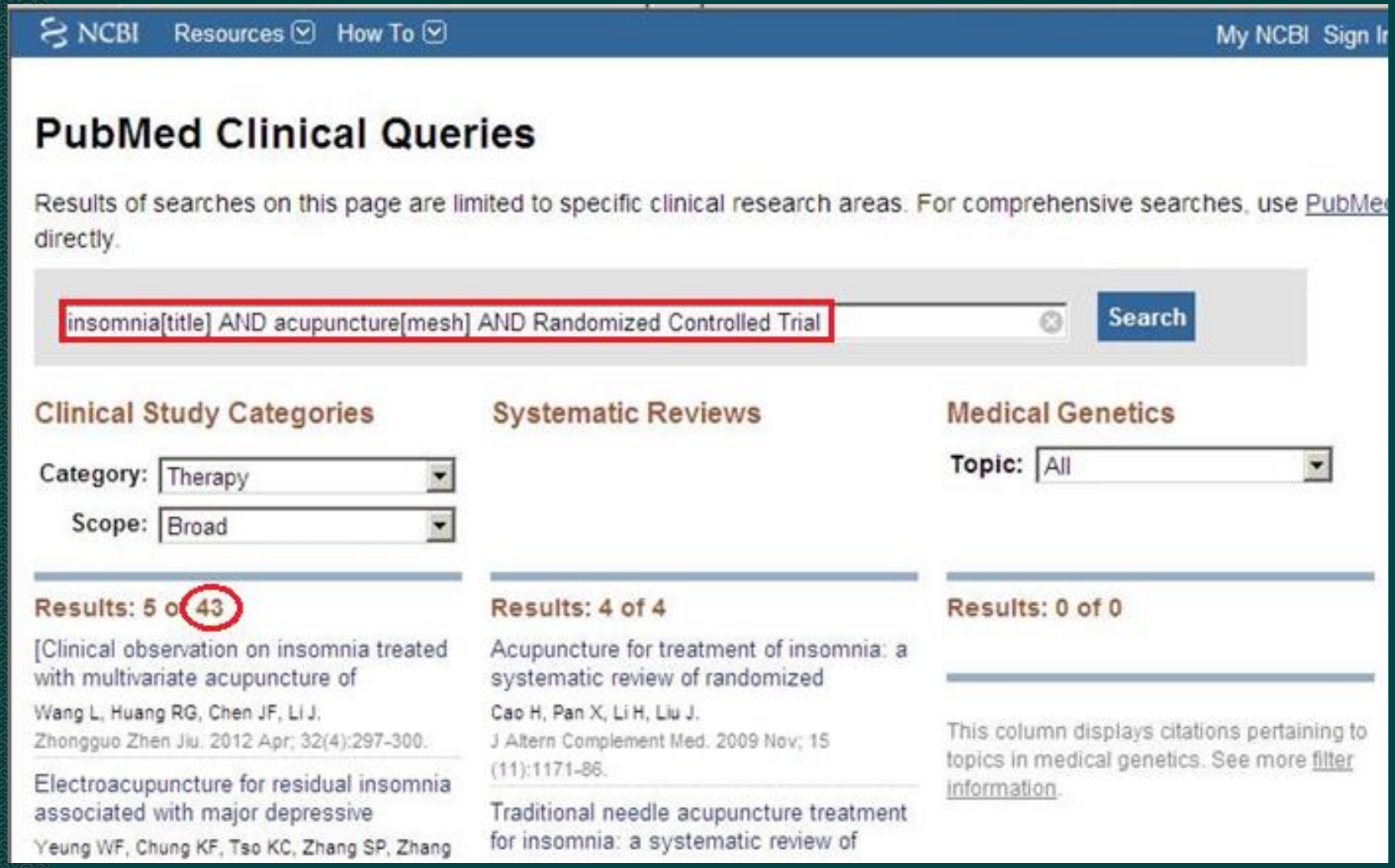
No.	Author (year)	Acupuncture rationale	Needling details								Co-interventions	Practitioner background	Control intervention
			Point used	No. of needles inserted	Depths of insertion	Responses elicited	Needle stimulation	Needle retention time	Needle type	Treatment regimen			
1	da Silva et al. (2005)	TCM	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2	Ding (2006)	TCM	Y*	NR	Y	NR	NR	NR	NE	Y	NA	NR	Y
3	Fan et al. (2006)	TCM	Y	Y	Y	Y	Y	Y	Y	Y	NA	NR	Y
4	Hou et al. (2005)	TCM	Y*	NR	NR	NR	Y	Y	NR	Y	NA	NR	Y
5	Kim et al. (2004)	NR	Y	Y	NR	NR	Y	Y	Y	Y	NA	NR	Y
6	Li et al. (2007)	TCM	Y	Y	Y	Y	Y	Y	NR	Y	NA	NR	Y
7	Liu et al. (2007)	Anat	Y	N	Y	Y	Y	Y	Y	Y	NA	NR	Y
8	Ma et al. (2006)	TCM	Y*	NR	NR	NR	NR	Y	NR	Y	NA	NR	Y
9	Pan et al. (2006)	TCM	Y*	NR	NR	Y	NR	Y	Y	Y	NA	NR	Y
10	Sang et al. (2004)	TCM	Y	Y	Y	NR	Y	Y	Y	Y	NA	NR	Y
11	Su et al. (2005)	TCM, Anat	Y	Y	Y	NR	Y	Y	Y	Y	NA	NR	Y
12	Wang et al. (2003)	TCM	Y*	NR	NR	NR	Y	Y	NR	Treatment duration NR	NA	NR	Y
13	Wei et al. (2006)	TCM	Y	Y	NR	Y	Y	Y	Y	Y	NA	NR	Y
14	Weng et al. (2007)	TCM	Y	Y	NR	NR	Y	NR	Y	Y	Y	NR	Y
15	Xiong et al. (2003)	TCM	Y*	NR	NR	NR	Y	NR	NR	Y	NA	NR	Y
16	Xuan et al. (2007)	TCM	Y*	NR	Y	NR	Y	Y	Y	Y	NA	NR	Y
17	Zhang et al. (2003)	TCM	Y*	NR	Y	Y	Y	Y	Y	Y	NA	NR	Y
18	Zhang (2005)	TCM	Y*	NR	Y	Y	Y	Y	NR	Y	NA	NR	Y
19	Zhu (2002)	TCM	Y*	NR	NR	NR	Y	Y	NR	Treatment duration NR	NA	NR	Y
20	Zou (2008)	TCM	Y	Y	Y	NR	Y	Y	NR	Y	NA	NR	Y

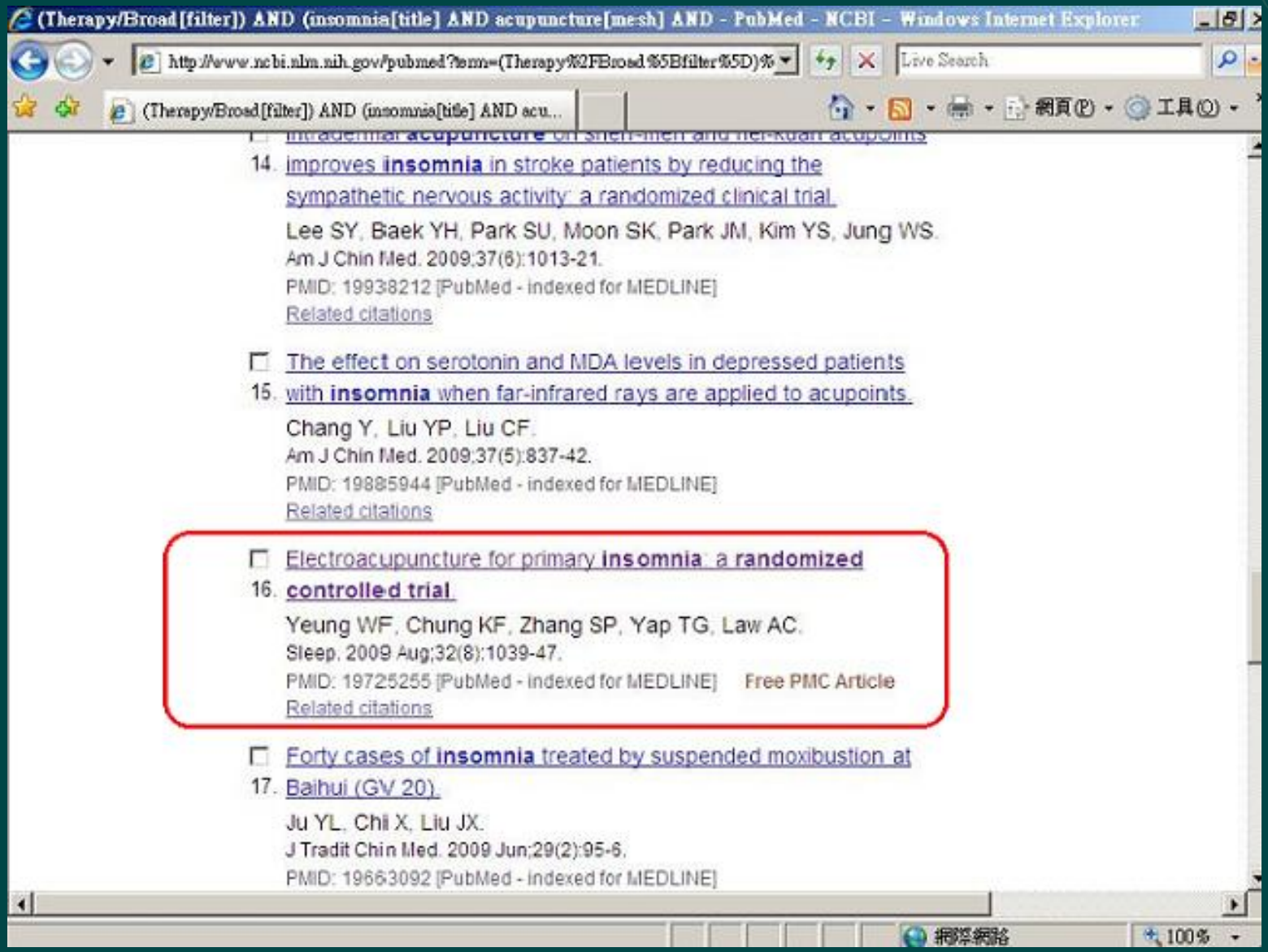
Anat, acupoints selection based on anatomy; NA, not applicable; NR not reported, TCM, acupoints selection based on TCM theory; Y, reported; Y*, reported but no mention of unilateral or bilateral needle placement.

Conclusion

- Since the majority of evidence regarding TNA for insomnia is based on studies with poor quality research designs, the data, while somewhat promising, do not allow a clear conclusion on the benefits of TNA for insomnia.
- Moreover, the results support the need for large scale placebo-controlled double-blinded trials.

Randomized controlled trial after 2009

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Live Search
(Therapy/Broad[filter]) AND (insomnia[title] AND acu...
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Lee SY, Baek YH, Park SU, Moon SK, Park JM, Kim YS, Jung WS.
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ELECTROACUPUNCTURE FOR PRIMARY INSOMNIA

Electroacupuncture for Primary Insomnia: A Randomized Controlled Trial

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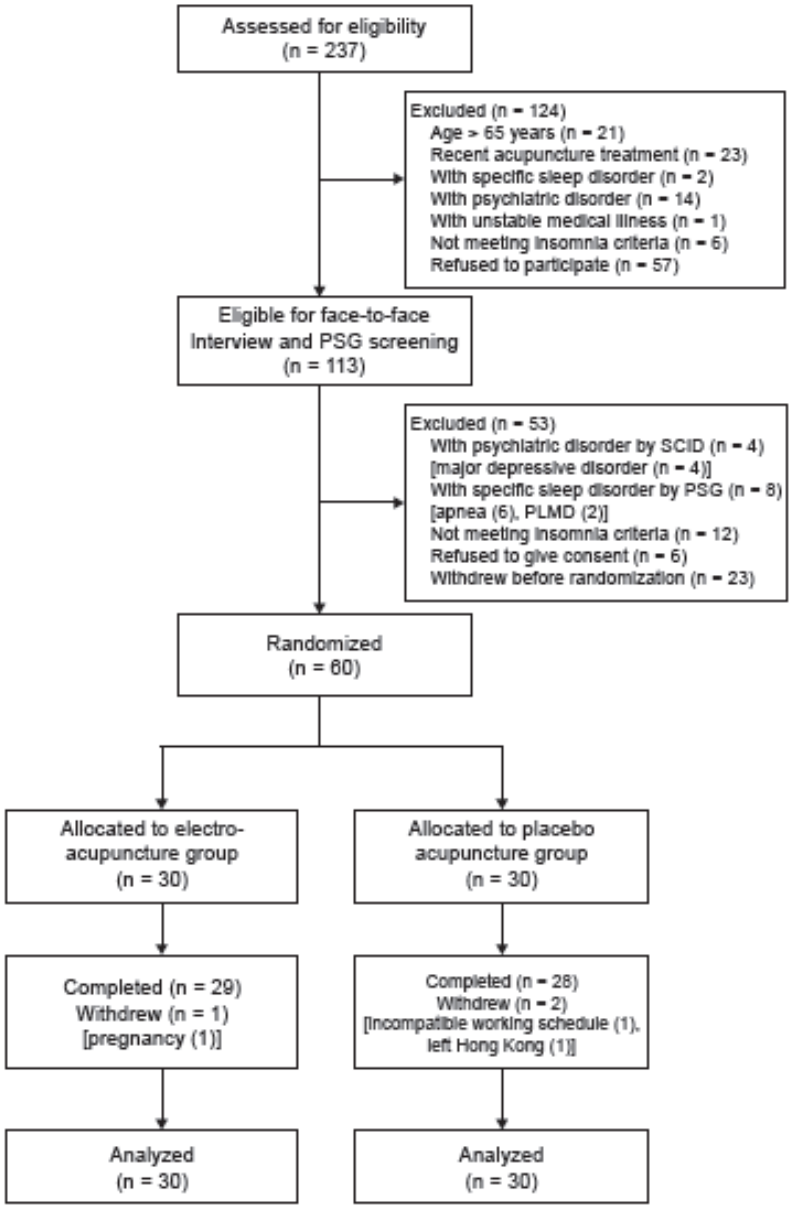

Figure 1—Participant flowchart. PSG refers to polysomnography; SCID, Structured Clinical Interview for DSM-IV

Table 1—Demographic and Clinical Characteristics of the Sample

Variables	Electro-acupuncture (n = 30)	Placebo acupuncture (n = 30)	Total (n = 60)	χ^2/ t value[a]	P Value
Age, y	48.3 ± 9.5	47.8 ± 8.6	48.0 ± 9.0	0.23	0.82
Sex, male/female	8/22	6/24	14/46	0.37	0.54
Education attainment, y	14.8 ± 3.0	14.3 ± 3.4	14.5 ± 3.2	0.60	0.55
Marital status				0.31	0.86
Never married	10 (33.3)	9 (30.0)	19 (31.7)		
Married/cohabiting	16 (53.3)	18 (60.0)	34 (56.7)		
Divorced/widowed	4 (13.3)	3 (10.0)	7 (11.7)		
Occupation				4.62	0.33
Professional or associate professional	10 (33.3)	5 (16.7)	15 (25.0)		
Skilled or semiskilled worker	9 (30.0)	11 (36.7)	20 (33.3)		
Unskilled worker	6 (20.0)	5 (16.7)	11 (18.3)		
Retired	4 (13.3)	4 (13.3)	8 (13.3)		
Unemployed/housework	1 (3.3)	5 (16.7)	6 (10.0)		
Insomnia duration, y	7.7 (8.1)	10.8 (16.7)	9.3 (8.9)	1.36	0.18
Previous treatment for insomnia					
Western medication	20 (66.7)	16 (53.3)	36 (60.0)	1.17	0.29
Psychological treatment	3 (10.0)	1 (3.3)	4 (6.7)	1.07	0.30
OTC drug	14 (46.7)	17 (56.7)	31 (51.7)	0.60	0.44
Chinese herbal medicine	18 (60.0)	18 (60.0)	36 (60.0)	0.00	1.00
Other[b]	9 (30.0)	6 (20.0)	15 (25.0)	0.89	0.37
Coffee use ≥ 1 cup/d	11 (36.7)	6 (20.0)	17 (28.3)	2.05	0.15
Alcohol use ≥ 3 times/wk	3 (10.0)	2 (6.7)	5 (8.3)	0.22	0.64
Chronic medical illness	6 (20.0)	2 (6.7)	8 (13.3)	2.31	0.13
ISI total score	18.8 ± 2.8	17.4 ± 2.5	18.1 ± 2.8	2.07	0.04
PSQI total score	12.0 ± 2.8	11.9 ± 2.1	12.0 ± 2.4	0.21	0.83
HADS score					
Anxiety	7.5 ± 4.2	7.0 ± 3.3	7.2 ± 3.8	0.47	0.64
Depression	6.3 ± 3.8	5.9 ± 3.0	6.1 ± 3.4	0.49	0.63
Polysomnography at screening visit					
TST	382.8 ± 71.1	370.4 ± 57.3	376.6 ± 64.3	0.74	0.46
SOL	31.4 ± 25.6	40.7 ± 42.2	36.1 ± 34.2	1.05	0.30
WASO	66.9 ± 46.4	80.5 ± 53.0	73.7 ± 49.8	1.06	0.29
SE	78.0 ± 14.5	75.9 ± 12.1	77.0 ± 13.2	0.62	0.54

Note: Data are presented as mean ± SD or number (%).

Abbreviations: HADS, Hospital Anxiety and Depression Scale; ISI, Insomnia Severity Index; OTC, over-the-counter; PSQI, Pittsburgh Sleep Quality Index; SE, sleep efficiency; SOL, sleep-onset latency; TST, total sleep time; WASO, wake after sleep onset.

[a]Comparison between electroacupuncture and placebo acupuncture by χ^2 or unpaired t-test.

[b]Others, including health and dietary products, yoga, massage, and hypnosis.

Table 2—Subjective Sleep Measures at Baseline and 1-week Posttreatment

	Electroacupuncture				Placebo Acupuncture					
	Mean	SD	Paired t-test P value	Within-group effect size	Mean	SD	Paired t-test P value	Within-group effect size	ANCOVA P value[a]	Between-group effect size
ISI total score										
Baseline	18.8	2.8			17.4	2.5				
Posttreatment	12.9	5.6	< 0.001	1.33	13.8	3.5	< 0.001	1.18	0.12	0.19
PSQI total score										
Baseline	12.0	2.8			11.9	2.1				
Posttreatment	9.9	3.2	< 0.001	0.70	9.7	2.6	< 0.001	0.93	0.86	0.07
Sleep diary										
SOL in min										
Baseline	50.2	66.2			45.7	37.1				
Posttreatment	34.4	33.7	0.04	0.30	36.9	26.8	0.05	0.27	0.29	0.08
TST in min										
Baseline	292.9	80.6			307.9	61.3				
Posttreatment	329.5	62.3	0.003	0.51	332.5	51.8	0.004	0.43	0.63	0.05
WASO in min										
Baseline	79.0	60.7			87.4	52.8				
Posttreatment	55.5	72.8	0.10	0.35	89.1	82.9	0.91	0.02	0.13	0.43
SE in %										
Baseline	69.8	17.9			70.2	12.9				
Post-treatment	81.2	10.7	< 0.001	0.77	73.7	12.7	0.06	0.27	0.002	0.64
Sleep quality[b]										
Baseline	2.83	0.5			2.73	0.4				
Posttreatment	2.42	0.5	0.001	0.82	2.39	0.4	0.001	0.85	0.96	0.07

Abbreviations: ISI refers to Insomnia Severity Index; PSQI, Pittsburgh Sleep Quality Index; SE, sleep efficiency; SOL, sleep-onset latency; TST, total sleep time; WASO, wake after sleep onset.

[a]One-way analysis of covariance (ANCOVA) using baseline sleep measures as covariates.

[b]A lower score represents better sleep quality.

Table 3—Actigraphy Measures of Sleep at Baseline and 1-week Posttreatment

	Electroacupuncture				Placebo Acupuncture					
	Mean	SD	Paired t-test P value	Within-group effect size	Mean	SD	Paired t-test P value	Within-group effect size	ANCOVA P value[a]	Between-group effect size
Actigraphy										
SOL, min										
Baseline	21.6	23.1			15.8	13.0				
Posttreatment	12.2	15.6	0.03	0.48	14.1	11.7	0.45	0.14	0.25	0.14
TST, min										
Baseline	408.4	64.5			422.0	51.9				
Posttreatment	412.3	53.4	0.63	0.07	417.8	47.1	0.72	0.08	0.97	0.11
WASO, min										
Baseline	28.7	32.9			19.2	19.1				
Posttreatment	17.0	20.1	0.01	0.43	19.7	18.9	0.89	0.03	0.10	0.14
SE, %										
Baseline	89.4	8.8			92.6	4.6				
Posttreatment	93.2	6.5	0.003	0.49	92.4	4.8	0.77	0.04	0.04	0.14

Abbreviations: SE, sleep efficiency; SOL, sleep-onset latency; TST, total sleep time; WASO, wake after sleep onset.
[a]One-way analysis of covariance (ANCOVA) using baseline sleep measures as covariates.

Table 4—Other Clinical Outcomes Measures at Baseline and 1-week Posttreatment

	Electroacupuncture			Placebo Acupuncture			
	Mean	SD	Paired t-test P value	Mean	SD	Paired t-test P value	ANCOVA P value[a]
HADS							
Anxiety score							
Baseline	7.5	4.2		7.0	3.3		
Posttreatment	6.3	4.3	0.001	5.8	3.8	0.005	0.90
Depression score							
Baseline	6.3	3.8		5.9	3.0		
Posttreatment	4.8	3.3	0.001	5.3	3.8	0.29	0.19
SDI							
Work							
Baseline	4.3	2.9		3.6	2.3		
Posttreatment	3.2	2.1	0.009	2.3	2.0	0.003	0.18
Social							
Baseline	3.6	2.4		2.6	2.2		
Posttreatment	2.8	2.0	0.11	2.5	1.8	0.74	0.98
Family							
Baseline	3.2	2.2		1.9	2.0		
Posttreatment	2.8	2.0	0.28	2.3	1.7	0.27	0.88

Abbreviations: HADS, Hospital Anxiety and Depression Scale; SDI, Sheehan Disability Index.
[a]One-way analysis of covariance (ANCOVA) using baseline sleep measures as covariates.

Conclusion

- We found a slight advantage of electroacupuncture over placebo acupuncture in the short-term treatment of primary insomnia.
- Because of some limitations of the current study, further studies are necessary to verify the effectiveness of acupuncture for insomnia.

APPLY TO YOUR PATIENT

- 針灸對於失眠治療可能有效
- 依實證醫學而言，目前證據力不足，有待更進一步研究

THANKS FOR YOUR ATTENTION