Acupuncture for Bell's palsy (Review)

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[Intervention Review]

Acupuncture for Bell's palsy

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ABSTRACT

Background

Bell's palsy or idiopathic facial palsy is an acute facial paralysis due to inflammation of the facial nerve. A number of studies published in China have suggested acupuncture is beneficial for facial palsy.

Objectives

The objective of this review was to examine the efficacy of acupuncture in hastening recovery and reducing long-term morbidity from Bell's palsy.

Search methods

We updated the searches of the Cochrane Neuromuscular Disease Group Trials Specialized Register (24 May 2010), The Cochrane Central Register of Controlled Trials (CENTRAL) (Issue 2, 2010), MEDLINE (January 1966 to May 2010), EMBASE (January 1980 to May 2010), AMED (January 1985 to May 2010), LILACS (from January 1982 to May 2010) and the Chinese Biomedical Retrieval System (January 1978 to May 2010) for randomised controlled trials using 'Bell's palsy' and its synonyms, 'idiopathic facial paralysis' or 'facial palsy' as well as search terms including 'acupuncture'. Chinese journals in which we thought we might find randomised controlled trials relevant to our study were handsearched. We reviewed the bibliographies of the randomised trials and contacted the authors and known experts in the field to identify additional published or unpublished data.

Selection criteria

We included all randomised controlled trials involving acupuncture by needle insertion in the treatment of Bell's palsy irrespective of any language restrictions.

Data collection and analysis

Two review authors identified potential articles from the literature search, extracted data and assessed quality of each trial independently. All disagreements were resolved by discussion between the review authors.

Main results

The literature search and handsearching identified 49 potentially relevant articles. Of these, six RCTs were included involving 537 participants with Bell's palsy. Two more possible trials were identified in the update than the previous version of this systematic review, but both were excluded because they were not real RCTs. Of the six included trials, five used acupuncture while the other one used acupuncture combined with drugs. No trial reported on the outcomes specified for this review. Harmful side effects were not reported in any of the trials. Poor quality caused by flaws in study design or reporting (including uncertain method of randomisation, allocation concealment and blinding) and clinical differences between trials prevented reliable conclusions about the efficacy of acupuncture.

Authors' conclusions

The quality of the included trials was inadequate to allow any conclusion about the efficacy of acupuncture. More research with high quality trials is needed.

PLAIN LANGUAGE SUMMARY

Acupuncture for Bell's palsy

Bell's palsy or idiopathic facial palsy is the most common disorder affecting the facial nerves and results in weakness or paralysis on one side of the face. The paralysis causes distortion of the face and interferes with normal functions, such as closing the eye and eating. It is thought to be caused by inflammation of the facial nerve.

According to Traditional Chinese Medicine, facial paralysis is known as 'deviated mouth'. It was attributed to 'wind' by past dynasties. 'Qi' refers to the vital substances comprising the human body and the physiological functions of viscera and bowels, channels and collaterals. It maintains life activities and reflects the resistance of the human body. Deficiency of 'qi' allows the invasion of exogenous pathogenic wind. Acupuncture is part of Traditional Chinese Medicine and dates back thousands of years. It involves inserting fine needles into specific points on the skin or applying various other techniques to the acupuncture points to bring about healing. In Bell's palsy, acupuncture treatment might have numerous beneficial effects. This review aimed to review systematically all randomised controlled trials and controlled clinical trials, which examined the effectiveness of acupuncture by needle insertion for Bell's palsy. Six studies including a total of 537 participants met the inclusion criteria. Five studies used acupuncture while the other used acupuncture combined with drugs. No trials reported on the outcomes specified for this review. Harmful side effects were not reported in any of the trials. Poor quality caused by flaws in study design or reporting (including uncertain method of randomisation, allocation concealment and blinding) and clinical differences between trials prevented reliable conclusions about the efficacy of acupuncture. More research with high quality trials is needed.

BACKGROUND

Bell's palsy or idiopathic facial palsy is a unilateral, lower motor neuron facial paralysis, which is acute in onset. It is the most common disorder affecting the facial nerves and results in weakness or paralysis on one side of the face. The paralysis causes distortion of facial features and interferes with normal functions, such as closing the eye and eating. Adour et al. (Adour 1978) advocated making a diagnosis based on the history and clinical symptoms including the presence of taste and the absence of hearing problems. May and Klein (May 1991) recommended excluding other diagnostic entities based on a defined workup and a lengthy differential diagnosis.

Studies of incidence have been carried out in the United States and in Japan (Brandenburg 1993; Katusic 1986; Yanagihara 1988). All relied on retrospective examination of hospital and clinic records to ascertain cases and are likely to have underestimated the frequency of mild cases that remained undiagnosed or were treated in primary care. Crude incidence rates in these studies were similar: in Rochester, Minnesota, USA, annual incidence was 25 per 100,000 population; in Laredo, Texas, USA, 23.5 per 100,000 in men and 32.7 per 100,000 in women; and in the Ehime prefecture, Japan, 30 per 100,000 population. Rates for men and women were similar in Rochester and in the Ehime prefecture. The peak incidence lies between 20 and 40 years of age. Both sides of the

face are affected equally (Martyn 1997; Prescott 1988).

Etiology and pathophysiology are heavily disputed. A viral infection, vascular ischemia, autoimmune inflammation and heredity have been proposed as the underlying cause (Adour 1982; Burgess 1984; Lorber 1996). From observations with the polymerase chain reaction to detect viral DNA, a herpes simplex virus mediated viral inflammatory immune mechanism has become more widely accepted as the cause (Jackson 1999).

The prognosis is on the whole favourable. Jabor reported that 84% showed satisfactory recovery without any treatment (Jabor 1996). One of the largest series of people with Bell's palsy, including those who were not receiving specific therapy, also showed that 85% of participants began to recover within three weeks after onset (Peitersen 1982). However 15% suffer moderate to severe sequelae. Prognosis is influenced by age and time until first sign of recovery. Prognostic testing currently involves various electrophysiological tests. Degeneration of more than 90% of the facial nerve carries a poor prognosis for recovery (Jabor 1996). Logistic regression analysis (Katusic 1986) suggested that the most important predictors of incomplete recovery were complete facial weakness, pain other than in or around the ear, and systemic hypertension.

Controversy remains regarding the effectiveness of commonly used pharmacologic therapies, steroids and aciclovir. Since a viral cause has long been postulated aciclovir would seem to be a promising drug, but studies have not adequately assessed its use (Adour 1996; Jabor 1996; Jackson 1999; McCormick 1972; Murakami 1996; Allen 2004). Two systematic reviews concluded that Bell's palsy could be effectively treated with corticosteroids in the first seven days (Grogan 2001; Ramsey 2000). One found that participants treated with combined aciclovir and prednisone had a better outcome than those treated with prednisone alone (Grogan 2001). However in the Cochrane systematic review, the available evidence from randomised controlled trials did not show significant benefit from corticosteroids (Salinas 2004). Surgical decompression for Bell's palsy has been proposed for people who have had electroneurography that demonstrates a compound muscle action potential amplitude decrease greater than 90% and who are in a time window roughly two to three weeks after the onset of paralysis (Fisch 1981).

According to Traditional Chinese Medicine (TCM) facial paralysis is known as 'deviated mouth'. It was attributed to 'wind' by past dynasties. 'Qi' refers to the vital substances comprising the human body and the physiological functions of viscera and bowels, channels and collaterals. It maintains life activities and reflects the resistance of the human body. Deficiency of 'qi' allows the invasion of exogenous pathogenic wind. Acupuncture is part of traditional Chinese medicine (TCM) and dates back thousands of years. It involves inserting fine needles into specific points on the skin or applying various other techniques to the acupuncture points to bring about healing. In Bell's palsy, acupuncture treatment is thought to regulate channels and collaterals, harmonize qi and blood, strengthen the body's resistance to pathogenic factors, increase the excitability of the nerve, promote regeneration of the nerve fibers and formation of its collateral branches, enhance muscle contraction and blood circulation, and accelerate metabolism and recovery of body functions (He 1995; Ren 1994). A number of studies especially in China have suggested a good therapeutic effect of acupuncture on facial palsy. The literature reports a lowest cure rate of 37% and a highest of 100%, averaging 81% (He 1995). This conclusion is from a non-systematic review of over 50 articles. However, the authors did not examine the quality of studies included in their review, so the results may be affected by the inclusion of studies of poor quality. Systematic review of acupuncture in the treatment of Bell's palsy is needed.

Since publication of the first version of this Cochrane review in 2006, some possibly relevant randomised controlled trials (RCTs) have been published and the assessment methodology has improved, necessitating update of this review.

OBJECTIVES

The objective of this review was to examine the efficacy of acupuncture in hastening recovery and reducing long-term morbidity from Bell's palsy.

METHODS

Criteria for considering studies for this review

Types of studies

We searched for all RCTs involving acupuncture in the treatment of Bell's palsy irrespective of any language restrictions.

Types of participants

We included all participants with Bell's palsy of all degrees of severity within 14 days from onset. Bell's palsy was preferably defined according to clinical diagnostic criteria as idiopathic lower motor neuron facial paralysis of sudden onset (one to two days) without other pathology. Chronic sequelae and cases of facial paralysis involving diabetes, herpes zoster or other causes of facial paralysis were not included.

Types of interventions

We included all types of acupuncture treatment and all types of control intervention including placebo, no acupuncture and any

other intervention. Acupuncture was limited to the stimulation of acupuncture points at classical meridian points and trigger points by needle insertion. Although derived from needle acupuncture, methods of stimulating acupuncture points other than needle insertion, e.g. acupressure or surface electrodes or laser acupuncture, are quite different in manipulation and tools used, so these techniques were excluded. If sham acupuncture was used, it was defined as the superficial needling of non-acupuncture points without needle manipulation, done either proximally or distally to the true acupuncture points or both.

Types of outcome measures

Primary outcomes

The primary outcome measure was the number of participants with incomplete recovery consisting of cosmetically disabling persistent sequelae of facial paralysis evaluated by clinical criteria six months after onset.

Secondary outcomes

Secondary outcome measures were:

1. Number of participants with complete facial paralysis evaluated by clinical criteria of TCM three months after onset;
2. Number of participants with motor synkinesis, crocodile tears or facial spasm six months after onset;
3. Number of participants reporting adverse effects attributable to acupuncture during treatment.

Search methods for identification of studies

Electronic searches

In this updated review, we searched the Cochrane Neuromuscular Disease Group Trials Register (24 May 2010) for RCTs using 'Bell's palsy' and its synonyms, 'idiopathic facial paralysis' or 'facial palsy' as well as search terms including 'acupuncture'. We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (Issue 2, 2010), MEDLINE (January 1966 to May 2010), EMBASE (January 1980 to May 2010), AMED (January 1985 to May 2010), LILACS (from January 1982 to May 2010) and the Chinese Biomedical Retrieval System (January 1978 to May 2010).
For electronic search strategies, see Appendix 1, Appendix 2, Appendix 3, Appendix 4, Appendix 5 and Appendix 6

Searching other resources

Chinese journals in which we thought we might find RCTs relevant to our study were handsearched. We reviewed the bibliographies of the RCTs and contacted the authors and known experts in the field to identify additional published or unpublished data.

Data collection and analysis

Selection of studies

Titles and abstracts identified from the register were scrutinized by two review authors. The full texts of all potentially relevant studies were obtained for independent assessment by the review authors. The review authors decided which trials fitted the inclusion criteria. Disagreements about inclusion criteria were resolved by discussion between the review authors.

Data extraction and management

Data on participants, methods, interventions, outcomes and results were extracted by two review authors independently and then were entered into Review Manager (RevMan 5). Missing data were obtained from the trial authors whenever possible.
The assessment of adequacy of the acupuncture treatment was extracted to document whether 'de qi' was elicited. 'De qi' also known as 'needling sensation', refers to induction of channel qi after the needle is inserted. During the 'needling sensation' participants may feel soreness, numbness, distension, heaviness around the point, or coldness, warmness, itching, pain and the feeling of an electric shock. The operator may feel tenseness and a dragging sensation around the needle. It is used by many TCM practitioners as a confirmatory signal of successfully needling a point.

Assessment of risk of bias in included studies

The assessment of risk of bias has taken into account the security of randomisation, allocation concealment, blinding, completeness of outcome data, selective outcome reporting, and any other potential sources of bias. These items were assessed by two authors independently according to the Cochrane Collaboration standard scheme. Then all included trials were judged for each item. In all cases 'Yes' indicated a low risk of bias, 'No' a high risk of bias and 'Unclear' that there was insufficient detail to assess risk of bias or the entry was not relevant to the study.
Disagreement between the review authors was resolved by discussion.

Assessment of reporting biases

We would have used a funnel plot to investigate the possibility of publication bias. Effect size would have been plotted against study size in a graphical display, which would give some indication whether or not some studies with particular study and effect size combination had not been published or located.

Data synthesis

RevMan 5 software was used for the statistical analysis. If meta-analysis was possible, results of clinically and statistically homogeneous trials were to be pooled to provide estimates of the efficacy of acupuncture in Bell's palsy. We would have analysed all the primary and secondary outcomes under consideration. Results were expressed as relative risks (RRs) for dichotomous outcomes and as mean differences (MDs) for continuous outcomes, both with 95% confidence intervals (CIs). For trials that were clinically heterogeneous or presented insufficient information for pooling, a descriptive analysis was performed.

To avoid unit-of-analysis error resulting from combining results of more than one time point for each study in a standard meta-analysis, we would have defined several different outcomes based on different periods of follow-up (specially on three and six months after disease onset) and performed separate analyses. While for studies that compared more than two intervention groups, we would have selected the relevant pair of intervention groups to include in the analyses.

Subgroup analysis and investigation of heterogeneity

We would have analysed the following subgroups of interest:

1. Time from onset of Bell's palsy to start of treatment (three days or less after onset, more than three and up to seven days after onset, and more than seven days after onset);
2. Younger and older (adults 49 years of age or less; adults aged 50 years or more). This is because prognosis is influenced by age (according to clinical experience, people aged 50 years or more have poorer prognosis than that of people younger than 50 years)

Sensitivity analysis

We would have assessed heterogeneity amongst trials by using the Chi^2 test with a 10% level of statistical significance ($P < 0.1$) and $I^2 > 50\%$. If significant heterogeneity was present, we would have performed a cause analysis, and then undertake subgroup and sensitivity analyses on the basis of methodological quality.

RESULTS

Description of studies

See: Characteristics of included studies; Characteristics of excluded studies.

Results of the search

The literature search and handsearching identified 49 potentially relevant articles. Of these, six RCTs were included involving 537 participants with Bell's palsy (Li 2005; Liu 1996; Ma 2004; Shao 1999a; Yang 2001;Yu 1999). Two more possible trials (Chen 2008; Li 2009) were identified in this update than in the previous version of this systematic review, but both were excluded because they were not real RCTs.

Included studies

In the first included study (Shao 1999a), 108 participants between the ages of 42 and 78 were randomly assigned to an experimental or control group. In both groups the participants were treated with dexamethasone, vitamin B1, vitamin B12, CDP-vitamin Bp (cytidinediphosphocholine-vitamin Bp, a specific form of vitamin Bp used for cerebral circulation deterioration. Other names include: CDP-choline). In the experimental group, the treatment consisted of selecting four to five points from Taiyang (EX-HN 5), Xiaguan (ST7), Jiache (ST6), Dicang (ST4), Quanliao (SI 18), Yifeng (SJ 17) and Yingxiang (LI 20), and one to two points from Hegu (LI 4), Fenglong (ST40), Zusanli (ST36), Taichong (LR 3), then inserting from between five and seven needles. The manipulation and duration of application were not described. The intervention took place once daily for a total of three courses at four-day intervals. The length of one course was 15 days. Outcomes were assessed before the intervention and at the end of last intervention. The first study (Shao 1999a) compared two groups: (a) Group 1, the experimental group (acupuncture combined with drugs dexamethasone, vitamin B1, vitamin B12, CDP-vitamin Bp and ribavirin) and (b) Group 2, the control group (the same drugs as used in experimental group). The experimental group was treated with acupuncture at five to seven specific documented points combined with drugs. The control group received exactly the same drug therapy as the experimental group. In the experimental group, the cure rate was 52% (30 cases), the markedly effective rate was 26% (15 cases), the effective rate was 21% (12 cases), the ineffective rate was 2% (one case) and the total effective rate was 98% (57 cases). This was compared with the control group where the cure rate was 12% (six cases), 54% markedly effective rate (27 cases), 20% effective rate (10 cases), 14% ineffective rate (seven cases) and 86% total effective rate (43 cases) respectively. A significant difference was found between the experimental and placebo groups in the cure rate ($P < 0.01$) and total effective rate ($P < 0.05$). The study indicated that the therapeutic effect in the experiment group was much better than that in the control group.

In the second included study (Liu 1996), 130 participants between the ages of eight and 75 were randomly assigned to an experimental or control group. In the experimental group, the treatment consisted of inserting up to 12 needles (30 x 45 mm) into various points: Yangbai (BL 14), Sibai (ST2), Jingming (BL 1), Quanliao (SI 18), Taiyang (EX-HN 5), Zanzhu (BL 2), Tongziliao (GB 1), Yifeng (SJ 17), Dicang (ST4), Yingxiang (LI 20), Fengchi (GB 20) and Hegu (LI 4). The length of application was 30 minutes. The needles were manipulated to achieve 'De qi'. The control group was administered deltacortone, vitamin B and Dibazol. Outcomes were assessed before the intervention and at the end of last intervention. The cure rate, effective rate, ineffective rate and total effective rate in the experimental group were 74% cure rate (48 cases), 23% effective rate (15 cases), 3% ineffective rate (two cases) and 97% total effective rate (63 cases) respectively, while in the control group they were 45% cure rate (30 cases), 31% effective rate (20 cases), 23% ineffective rate (15 cases) and 77% total effective rate (50 cases) respectively. The statistical data showed there was a significant difference between the experimental and the control group in each of the study outcomes ($P < 0.01$) such that the therapeutic effect in the acupuncture group was superior to that of the drug group.

In the third included study (Yu 1999), 50 participants between the age of 17 and 78 were randomly assigned to an experimental or control group. In the experimental group, the treatment consisted of inserting up to eight needles (40 mm length) at an angle of 45 degrees to the skin surface from Sizhukong (SJ 23) to Taiyang (EX-HN 5), from Yangbai (BL 14) to Yuyao (EX-HN 4), from Sibai (ST2) to Dicang (ST4), from Xiaguan (ST7) to Jiache (ST6), from Yingxiang (LI 20) to Jingming (BL 1), from Dicang (ST4) to Jiache (ST6), from Renzhong (DU,GV 36) to Dicang (ST4), and from Yifeng (SJ 17) to Jiache (ST6). The length of application was 20 minutes. Strong stimulation was applied at the moment of inserting and withdrawing. The control group was administered Chinese medicine (details not reported), vitamin B, and steroid treatment. Outcomes were assessed before the intervention and at the end of last intervention. In the experimental group, the cure rate was 83.3% (25 cases), the effective rate was 16.7% (five cases) and total effective rate 100% (30 cases) were respectively higher than those of the control group: cure rate 45% (nine cases), effective rate 10% (two cases) and total effective rate 55% (11 cases), showing a statistically significant difference ($P < 0.01$) in favour of acupuncture.

In the fourth included study (Ma 2004), 95 HIV antibody positive participants with facial paralysis were randomly assigned to acupuncture, moxibustion, acupuncture plus moxibustion or control group. In the acupuncture group, the treatment consisted of inserting up to 13 needles (40 mm length) in the Yangbai (BL 14), Sibai (ST2), Yifeng (SJ 17), Qianzheng (EX-HN 17),Yingxiang (LI 20), Dicang (ST4), Jiache (ST6), Qihai (RN6),and Guanyuan (RN4) points on the paralytic side and Hegu (LI 4), Zusanli (ST36) points on both sides. The needles were manipulated until 'De qi' was achieved. The length of application was 30 minutes. The control group received an intramuscular injection of vitamin B1 and B12. The intervention took place once daily for a total of six courses at two-day intervals. The length of one course is five days.The outcome measures were assessed before the start of the intervention and two days after last intervention.

The experimental group was treated with acupuncture at 13 specific documented points. The control group received Vitamin B therapy. In the experimental group, the cure rate was 63%, effective rate 27%, ineffective rate 10%, total effective rate 90% compared with control group 17%, 40%,43% and 57%. A significant difference was found between the experimental and control groups in the cure rate ($P < 0.01$) and total effective rate ($P < 0.01$). The study indicated that the therapeutic effect in the experiment group was much better than that in the control group.

In the fifth included study (Li 2005), 94 participants between the age of six and 65 were randomly assigned to an experimental or control group. In the experimental group, the treatment consisted of inserting up to 11 needles in the skin surface from the Dicang (ST4) to Jiache (ST6) point, from the Yangbai (BL 14) to Yuyao (EX-HN 4) point, and inserting a needle in the Cuanzhu (BL2), Taiyang (EX-HN 5), Yingxiang (LI 20), Xianguan (ST7), Yifeng (SJ 17), Hegu (LI 4) and Taichong (LR3) points. The length of application was 20 minutes. Stimulation was applied by electric current (electronic acupuncture). The control group was given Chinese traditional manipulation, which consisted of finger massaging the Dicang (ST4), Jiache (ST6), Yangbai (BL 14),Yuyao (EX-HN 4), Cuanzhu (BL2),Taiyang (EX-HN 5), Yingxiang (LI 20), Xianguan (ST7), Yifeng (SJ 17), and Hegu (LI 4) points. The intervention took place once daily for a total of four courses at two-day intervals. The length of one course was five days. The outcome measures were assessed before the start of the intervention and two days after the last intervention. The cure rate, markedly effective rate, effective rate, ineffective rate and total effective rate in the experimental group were 62.5%, 25%, 12.5%, 0% and 100% respectively, while in the control group 63%, 28%, 9%, 0% and 100%. The statistical data showed there was no significant difference between the experimental and the control group in each item of the study outcomes ($P > 0.05$).

In the sixth included study (Yang 2001), 60 participants between the age of 15 and 58 were randomly assigned to an experimental or control group. In the control group, the treatment consisted of putting surface electrodes at the Hegu (LI 4), Jiache (ST6), Dicang (ST4), Xianguan (ST7), Yifeng (SJ 17), Taiyang (EX-HN 5) and Sibai (ST2) points. Stimulation was applied by using an electric current. The length of application was two minutes. In the experimental group the treatment consisted of inserting up to nine needles (40 mm length) from Dicang (ST4) to Jiache (ST6) point, from Yangbai (BL 14) to Yuyao (EX-HN 4) point respectively, and inserting a needle in the Yingxiang (LI 20), Xianguan (ST7), Sibai (ST2),Yifeng (SJ 17) and Hegu (LI 4) points on the paralytic

side. The needles were manipulated until 'De qi' was achieved and then stimulation was applied by using electric current (electronic acupuncture). The length of application was 30 minutes.The intervention took place once daily for a total of 21 days. Outcomes were assessed before the intervention and at the end of the last intervention. The experimental group was treated by putting surface electrodes at six specific documented points and by using an electric current. The control group received acupuncture at seven specific documented points. In the experimental group, the cure rate was 23.3%, effective rate 76.7%, ineffective rate 0%, total effective rate 100% compared with the control group 13.3%, 87.6%, 0% and 100% on the 14th day after treatment. A significant difference was found between the experimental and control groups in the cure rate ($P < 0.05$) but no significant difference was found in the total effective rate ($P < 0.05$). In the experimental group, the cure rate (93.3%), effective rate (6.7%) and the total effective rate (100%) were respectively similar with those of the control group (cure rate 90.0%, effective rate 10.0% and total effective rate 100%) on the 21st day, showing no statistically significant difference ($P > 0.05$). The study indicated that the therapeutic effect in the experimental group was similar to that in the control group.

None of these studies reported follow-up.

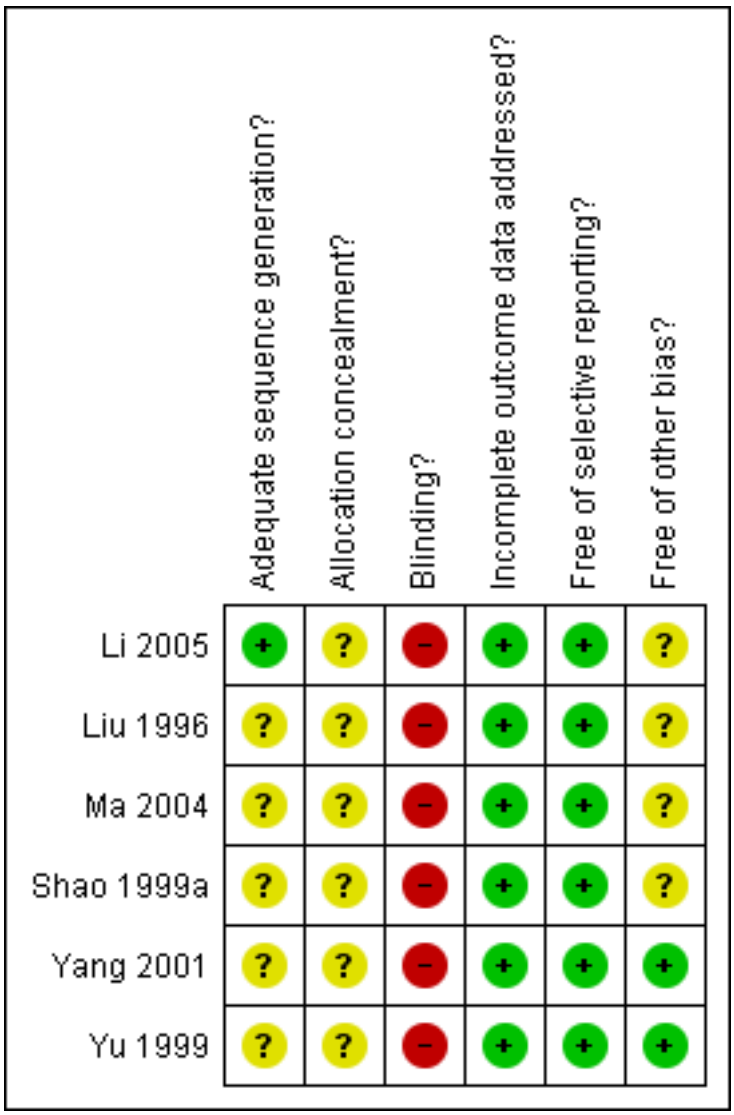
Excluded studies

Forty trials were excluded for the following reasons: (1) no control group was used (Ren 1987; Wu 1987; Zhang 1997b); (2) trials compared different methods of acupuncture (Gao 1998; Li 1987; Li 1997; Xing 1997; Zang 1999; Zhang 1997a); (3) randomisation was not used (Anon 1998; Chen 2008; Li 2009; Liu 1995; Shao 1999b; Zhu 1995); (4) acupuncture and Chinese herb were compared with Western medicine (Chen 2003; Huang 1999; Shui 1999); (5) infra-red ray therapy apparatus was applied in the experimental group but not in the control group (Peng 2002); (5) moxibustion was applied in the experimental group but not in the control group (Diao 2002; Diao 2003; Li 2004a; Wang 2003); (6) acupuncture was applied in both or all groups (Chen 2000; Chen 2004; Huang 2001; Li 2002; Li 2004b; Liu 2001; Liu 2005; Pan 2004; Wang 2004; Wang 2005a; Wang 2005b; Yang 2002; Yang 2003; Ye 2003; Yu 2003; Zeng 2006; Zhang 2003; Zhang 2005; Zhong 2005; Zhou 2004).

Risk of bias in included studies

The trials included methodological and/or reporting shortcomings. Randomisation was stated to be performed for all trials, but the method of random sequence generation was reported for only one of the included trials (Li 2005). Methods of allocation concealment were unclear for all studies, as no explicit statements about concealment were reported in trials. Blinding could not be performed to patients or curers, since treating methods were so different between groups and no sham treatment was used in any study. Whether treating measures were blinded to efficacy evaluators was unclear.The completeness of follow-up was not reported in any one of the six articles, but from the numbers of patients authors reported from the beginning to the end of each trial, we might think none was lost during follow-up. In all 6 included studies, outcomes prespecified in their protocols were recovery of facial paralysis evaluated by clinical criteria, and all were reported. So they were free of selective reporting. Only Yu et al (Yu 1999) and Yang et al (Yang 2001) reported that baseline differences between groups were not significant. As a result, all included trials were rated as having a high risk of bias (Figure 1).

Figure 1. Methodological quality summary: review authors' judgements about each methodological quality item for each included study.



Effects of interventions

Six studies including a total of 537 participants met the inclusion criteria for the review but their methodological quality was poor. Five used acupuncture (Li 2005; Liu 1996: Ma 2004; Yang 2001; Yu 1999) and one acupuncture combined with drugs (Shao 1999a). Four of the included trials compared acupuncture with drugs (Liu 1996; Ma 2004; Shao 1999a; Yu 1999), while two compared acupuncture with manipulation and physical therapy respectively. No trials reported the outcomes specified for this review, instead they reported grades as "cure", "markedly effective", "effective" and "ineffective" and therefore they could not be combined for meta-analysis.

The presence of harmful side effects was not reported in any of these trials.

Six small RCTs were included but due to flaws in study designs or reporting and clinical differences between trials, data from trials were not combined in a meta-analysis.
There were inadequate data to perform any of the planned sub-

group analyses.

DISCUSSION

Six RCTs with a total of 537 participants, comparing acupuncture with other forms of therapy for Bell's palsy or idiopathic facial palsy, met the inclusion criteria for this review. None of these trials reported on the outcomes specified for this review. The research methods (method of allocation sequence generation, allocation concealment, blinding and completeness of outcome data) were not clearly outlined in any of the trials. The outcome measures used were not currently recognised and did not provide strong objective data. Moreover, the trials varied greatly with respect to the precise nature of the acupuncture intervention, study duration and the method of outcome assessment. Although the authors of the trials reported beneficial effects, the review authors consider that the conclusions from the available trials comparing acupuncture with no acupuncture or with other drugs are unreliable because of methodological shortcomings. More well-designed RCTs studying the efficacy of acupuncture among patients of different ages, with different degree or duration of Bell's palsy, are required. Assessments should be performed by blinded observers; long-term follow-ups are needed and should be reported in detail.

AUTHORS' CONCLUSIONS

Implications for practice

Six small RCTs in this review suggested a beneficial effect of acupuncture in treating Bell's palsy, but the poor quality of these trials precluded reliable conclusions.

Implications for research

There is a need for high quality RCTs using a study design which assures high internal validity. These studies should be conducted as randomised controlled trials with valid random sequence generation, adequate allocation concealment, blinding of outcome assessors and adequate handling of any attrition (by means of reporting any losses to follow-up and by performing intention-to-treat analyses).

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* *Indicates the major publication for the study*

CHARACTERISTICS OF STUDIES

Characteristics of included studies *[ordered by study ID]*

Li 2005

Methods	Randomised design. Sample size = 94 (withdrawals: unclear). Experimental Group: 48 acupuncture. Control Group: 46 manipulation. Treatment follow up: after the fourth treatment session. Treatment duration: 7 x 4 days.
Participants	Inclusion: participants with Bell's palsy defined according to clinical diagnostic criteria of all degrees of severity. Aged from 6 to 65, mean age: unclear. Male 43, female 51.
Interventions	Experimental group: treatment with acupuncture, five days per week with two rest days. Control group: treatment with manipulation, five days per week. Size of needles: unclear. Total number of sites: 11. Length of application: 20 minutes. Length of session: 1 week. Total number of treatment sessions: 4.
Outcomes	Cured (disappearance of all signs and symptoms, the facial symmetry and the function of mimetic muscle were fully restored after treatment). Markedly effective (the facial symmetry was normal in repose, however, during movement, low-grade paralysis persisted after treatment). Improved (the facial symmetry was improved, however, during movement, paralysis persisted after treatment). No effect (signs and symptoms unchanged after treatment).
Notes	Experimental group: Cured: 30; Markedly effective:12; Improved:6; No effect: 0. Control group: Cured: 29; Markedly effective: 13; Improved: 4; No effect:0

Risk of bias

Item	Authors' judgement	Description
Adequate sequence generation?	Yes	Random numbers were generated by computer.
Allocation concealment?	Unclear	Method of allocation concealment was not described.
Blinding? All outcomes	No	Treating methods between groups were so different that it was impossible to conduct any blind measure to patients or curers. But

Li 2005 (*Continued*)

		whether treating measures were blinded to efficacy evaluators was not reported
Incomplete outcome data addressed? All outcomes	Yes	No missing data.
Free of selective reporting?	Yes	All outcomes prespecified in its protocol were reported.
Free of other bias?	Unclear	Severity of the disease and other features at baseline were not compared between groups, but they might impact the results

Liu 1996

Methods	Randomised design. Sample size = 130 (withdrawals: unclear). Group 1: 65 participants treated with acupuncture. Group 2: 65 participants treated with drug treatment. Follow-up: after 10 days treatment. Treatment duration: 10 x 1 day.
Participants	Inclusion criteria: participants with Bell's palsy defined according to clinical diagnostic criteria of all degrees of severity within 14 days from onset. Age 8 to 75, mean 38.5 years. Males 70, females 60.
Interventions	Group 1: treatment with acupuncture (multiple superficial needling). Group 2: treatment with drugs. Size of needles: 30 x 45 mm. Drugs: deltacortone 20 mg three times a day, Vitamin B and Dibazol. The Vitamin B and Dibazol prescriptions were unclear. Total number of sites: 12. Length of application: 30 minutes. Length of session: 10 days. Total number of treatment sessions: 1.
Outcomes	Cured (disappearance of all signs and symptoms, the facial symmetry and the function of mimetic muscle were fully restored after treatment). Improved (the facial symmetry was improved or restored, but some paralysis persisted after treatment). No effect (signs and symptoms unchanged after treatment).
Notes	Experimental group: Cured: 48 participants; Improved: 15 participants; No effect: 2 participants. Control Group: Cured: 30 participants;

Liu 1996 (*Continued*)

	Improved: 20 participants; No effect: 15 participants.

Risk of bias

Item	Authors' judgement	Description
Adequate sequence generation?	Unclear	Method of sequence generation was not described.
Allocation concealment?	Unclear	Method of allocation concealment was not described.
Blinding? All outcomes	No	The controlled group was treated with oral drugs, and no sham acupuncture or placebo was used, so it was impossible to conduct any blind measure to patients or curers. But whether treating measures were blinded to efficacy evaluators was not reported
Incomplete outcome data addressed? All outcomes	Yes	No missing data.
Free of selective reporting?	Yes	All outcomes prespecified in its protocol were reported.
Free of other bias?	Unclear	Severity of the disease and other features at baseline were not compared between groups, but they might impact the results

Ma 2004

Methods	Randomised design. Sample size: 95 (withdrawals unclear). Experimental group: 48 acupuncture. Control group: 47 drugs (Vitamin B1, Vitamin B12). Treatment follow up: after the sixth treatment session. Treatment duration: 7 x 6 days.
Participants	Inclusion: HIV antibody positive people with Bell's palsy defined according to clinical diagnostic criteria of all degrees of severity. Age from 15 to 48, mean age: unclear. Male 46, female 49.
Interventions	Experimental group: treatments with acupuncture, five days per week with two rest days. Control group: treatments with drugs, five days per week. Size of needles: 40 mm length.

Ma 2004 (*Continued*)

	Drugs: Vitamin B1, Vitamin B12, Prescriptions: Vitamin B1 100 mg plus Vitamin B12 500 ug, intramuscular injection once a day. Total number of sites: 13. Length of application: unclear. Length of session: 1 week. Total number of treatment sessions: 6.
Outcomes	Cured (disappearance of all signs and symptoms, the facial symmetry and the function of mimetic muscle were fully restored after treatment). Improved (the facial symmetry was improved or restored, however, during movement, paralysis persisted after treatment). No effect (signs and symptoms unchanged after treatment).
Notes	Experimental group: Cured: 30; Improved:13; No effect: 5. Control group: Cured:8; Improved:19; No effect: 20.

Risk of bias

Item	**Authors' judgement**	**Description**
Adequate sequence generation?	Unclear	Method of sequence generation was not described.
Allocation concealment?	Unclear	Method of allocation concealment was not described.
Blinding? All outcomes	No	The controlled group was treated with intramuscular injection of drugs, and no sham injection or acupuncture was used, so it was impossible to conduct any blind measure to patients or curers. But whether treating measures were blinded to efficacy evaluators was not reported
Incomplete outcome data addressed? All outcomes	Yes	No missing data.
Free of selective reporting?	Yes	All outcomes prespecified in its protocol were reported.
Free of other bias?	Unclear	Severity of the disease and other features at baseline were not compared between groups, but they might impact the results

Shao 1999a

Methods	Randomised design. Sample size:108 (withdrawals unclear)
Participants	Inclusion criteria: participants with Bell's palsy defined according to clinical diagnostic criteria of all degrees of severity within 14 days from onset. Group 1: aged from 42 to 78, mean: 57 years. Males 45, females 13. Group 2: aged from 43 to 77, mean: 56 years. Males 35, females 15.
Interventions	Group 1: 3 treatments of acupuncture combined with drugs, at 4-day intervals. Group 2: 3 treatments with drugs, at 4-day intervals. Size of needles: unclear. Drugs: Dexamethasone, vitamin B1, vitamin B12, CDP-vitamin Bp and ribavirin. The prescriptions were unclear. Total number of sites: 5 to 7. Length of application: unclear. Length of session: 15 days. Total number of treatment sessions: 3.
Outcomes	Cured (disappearance of all signs and symptoms: facial symmetry and the function of mimetic muscle were fully restored after treatment.). Markedly effective (the facial symmetry was normal in repose, but during movement, low-grade paralysis persisted after treatment). Improved (the facial symmetry was improved, however, during movement, paralysis persisted after treatment). No effect (signs and symptoms unchanged after treatment).
Notes	Experimental group: Cured: 30 participants; Markedly effective: 15 participants; Improved: 12; No effect: 1. Control group: Cured: 6 participants; Markedly effective: 27 participants; Improved: 10 participants; No effect: 7 participants.

Risk of bias

Item	Authors' judgement	Description
Adequate sequence generation?	Unclear	Method of sequence generation was not described.
Allocation concealment?	Unclear	Method of allocation concealment was not described.

Shao 1999a (*Continued*)

Blinding? All outcomes	No	The controlled group was treated with oral drugs, and no acupuncture or placebo was used, so it was impossible to conduct any blind measure to patients or curers. But whether treating measures were blinded to efficacy evaluators was not reported
Incomplete outcome data addressed? All outcomes	Yes	No missing data.
Free of selective reporting?	Yes	All outcomes prespecified in its protocol were reported.
Free of other bias?	Unclear	Severity of the disease and other features at baseline were not compared between groups, but they might impact the results

Yang 2001

Methods	Randomised design. Sample size: 60. (withdrawals: unclear). Control Group: 30 physical therapy apparatus treatment. Experimental Group: 30 acupuncture. Treatment follow up: 14th day and 21st day during the treatment. Treatment duration: 21 days.
Participants	Inclusion: participants with Bell's palsy defined according to clinical diagnostic criteria of all degrees of severity. Age from 15 to 58, mean age: unclear. Male 28, female 32.
Interventions	Control group: treatment with physical therapy apparatus, once a day. Experimental group: treatments with acupuncture, once a day. Size of needles: 40 mm length. Total number of sites: 11 Length of application: 30 minutes. Length of session:10 days. Duration of treatment: 21 days.
Outcomes	Cured (disappearance of all signs and symptoms, the facial symmetry and the function of mimetic muscle were fully restored after treatment). Improved (the facial symmetry was improved or restored, however, during movement, paralysis persisted after treatment). No effect (signs and symptoms unchanged after treatment).

Yang 2001 (*Continued*)

Notes	14th day after treatment. Control group: Cured: 7; Improved: 23; No effect: 0. Experimental group: Cured: 4; Improved: 26; No effect: 0. 21st day after treatment: Control group: Cured: 28; Improved: 2; No effect: 0. Experimental group: Cured: 27; Improved: 3; No effect: 0.

Risk of bias

Item	Authors' judgement	Description
Adequate sequence generation?	Unclear	Method of sequence generation was not described.
Allocation concealment?	Unclear	Method of allocation concealment was not described.
Blinding? All outcomes	No	Treating methods between groups were so different that it was impossible to conduct any blind measure to patients or curers. But whether treating measures were blinded to efficacy evaluators was not reported
Incomplete outcome data addressed? All outcomes	Yes	No missing data.
Free of selective reporting?	Yes	All outcomes prespecified in its protocol were reported.
Free of other bias?	Yes	No other potential bias was found.

Yu 1999

Methods	Randomised design. Sample size 50 (withdrawals: unclear). Group 1: 30 participants treated with acupuncture. Group 2: 20 participants treated with drug treatment. Follow-up: after the third treatment session. Treatment duration: 10 x 3 days.
Participants	Inclusion criteria: participants with Bell's palsy defined according to clinical diagnostic criteria of all degrees of severity. Age from 17 to 78, mean: 39.3 years. Males 29, females 21.

Yu 1999 (*Continued*)

Interventions	Group 1: 3 treatments with acupuncture. Group 2: 3 treatments with drugs. Size of needles: 40 mm. Drugs: medicine, Vitamin B, and steroids. The prescriptions were unclear. Total number of sites: 8. Length of application: 20 minutes. Length of session: 10 days. Total number of treatment sessions: 3.
Outcomes	Cured (disappearance of all signs and symptoms, the facial symmetry and the function of mimetic muscle were fully restored after treatment). Improved (the facial symmetry was improved or restored, however, during movement, paralysis persisted after treatment). No effect (signs and symptoms unchanged after treatment).
Notes	Experimental group: Cured: 25 participants; Improved: 5 participants; No effect: 0. Control group: Cured: 9 participants; Improved: 2 participants; No effect: 9 participants.

Risk of bias

Item	**Authors' judgement**	**Description**
Adequate sequence generation?	Unclear	Method of sequence generation was not described.
Allocation concealment?	Unclear	Method of allocation concealment was not described.
Blinding? All outcomes	No	Treating methods between groups were so different that it was impossible to conduct any blind measure to patients or curers. But whether treating measures were blinded to efficacy evaluators was not reported
Incomplete outcome data addressed? All outcomes	Yes	No missing data.
Free of selective reporting?	Yes	All outcomes prespecified in its protocol were reported.
Free of other bias?	Yes	No other potential bias was found.

Characteristics of excluded studies *[ordered by study ID]*

Study	Reason for exclusion
Anon 1998	No randomisation.
Chen 2000	Acupuncture was applied in all groups.
Chen 2003	Acupuncture combined with herbs compared with Western medicine
Chen 2004	Acupuncture was applied in both groups.
Chen 2008	Not real RCT. Patients were allocated to groups according to sequence of admission
Chen 2009	Comparing different methods of acupuncture treatment.
Diao 2002	Moxibustion was applied in the experimental group but not in the control group
Diao 2003	Moxibustion was applied in the experimental group but not in the control group
Gao 1998	Comparing different methods of acupuncture.
Huang 1999	Acupuncture plus Chinese herb compared with Western medicine
Huang 2001	Acupuncture was applied in both groups.
Li 1987	Comparing different methods of acupuncture.
Li 1997	Comparing different methods of acupuncture.
Li 2002	Acupuncture was applied in both groups.
Li 2004a	Moxibustion was applied in the experimental group but not in the control group
Li 2004b	Acupuncture was applied in both groups.
Li 2009	Not a real RCT. Patients were allocated to groups according to sequence of admission
Liu 1995	No randomisation.
Liu 2001	Acupuncture was applied in both groups.
Liu 2005	Acupuncture was applied in both groups
Luo 2010	Comparing different acupuncture treatment programs; acupuncture was applied in each group
Pan 2004	Acupuncture was applied in both groups.

(*Continued*)

Peng 2002	Infra-red ray therapy apparatus was applied in the experimental group but not in the control group
Reheman 2009	Comparing acupuncture plus moxibustion treatment with only acupuncture treatment
Ren 1987	No control group.
Shao 1999b	No randomisation.
Shui 1999	Acupuncture plus Chinese herb compared with Western medicine
Wang 2003	Moxibustion was applied in the experimental group but not in the control group
Wang 2004	Acupuncture was applied in both groups.
Wang 2005a	Acupuncture was applied in both groups.
Wang 2005b	Acupuncture was applied in both groups.
Wu 1987	No control group.
Xing 1997	Comparing different methods of acupuncture.
Yang 2002	Acupuncture was applied in both groups.
Yang 2003	Acupuncture was applied in both groups.
Yang 2009	Comparing acupuncture plus acupoint injection with electroacupuncture treatment
Ye 2003	Acupuncture was applied in both groups.
Yu 2003	Acupuncture was applied in both groups.
Zang 1999	Comparing different methods of acupuncture.
Zeng 2006	Acupuncture was applied in both groups.
Zhang 1997a	Comparing different methods of acupuncture.
Zhang 1997b	No control group.
Zhang 2003	Acupuncture was applied in both groups.
Zhang 2005	Acupuncture was applied in both groups.
Zhong 2005	Acupuncture was applied in both groups.

(*Continued*)

Zhou 2004	Acupuncture was applied in both groups.
Zhu 1995	No randomisation.

DATA AND ANALYSES

This review has no analyses.

APPENDICES

Appendix 1. MEDLINE OvidSP Search Strategy

1 randomized controlled trial.pt.
2 controlled clinical trial.pt.
3 randomized.ab.
4 placebo.ab.
5 drug therapy.fs.
6 randomly.ab.
7 trial.ab.
8 groups.ab.
9 or/1-8
10 (animals not (animals and humans)).sh.
11 9 not 10
12 bell palsy/
13 exp Facial Nerve Diseases/
14 facial paralysis/ or hemifacial spasm/
15 ((Bell$ or facial$ or hemifacial$ or unilateral$ or nerve$ or cranial$) adj3 (pals$ or paralys$ or paresi$ or spasm$)).mp.
16 or/12-15
17 Acupuncture/
18 exp Acupuncture Therapy/
19 (electroacupuncture or electro-acupuncture).mp.
20 (acupuncture$ or acupoint or acupressure).mp.
21 plum blossom needl$.ti,ab.
22 three edged needl$.ti,ab.
23 wrist ankle needl$.ti,ab.
24 (fire needl$ or warming needl$).ti,ab.
25 meridians.ti,ab.
26 moxibustion.ti,ab.
27 cupping.ti,ab.
28 bloodletting.ti,ab.
29 or/17-27
30 11 and 16 and 29

Appendix 2. EMBASE OvidSP Search Strategy

1 crossover-procedure/
2 double-blind procedure/
3 randomized controlled trial/
4 single-blind procedure/
5 (random$ or factorial$ or crossover$ or cross over$ or cross-over$ or placebo$ or (doubl$ adj blind$) or (singl$ adj blind$) or assign$ or allocat$ or volunteer$).tw.
6 or/1-5
7 human/
8 6 and 7

9 nonhuman/ or human/
10 6 not 9
11 8 or 10
12 bell palsy/
13 exp Nerve Paralysis/
14 facial nerve paralysis/ or hemifacial spasm/
15 ((Bell$ or facial$ or hemifacial$ or unilateral$ or cranial$ or nerve$) adj3 (pals$ or paralys$ or paresi$ or spasm$)).mp.
16 or/12-15
17 exp Acupuncture/
18 (electroacupuncture or electro-acupuncture).mp.
19 (acupuncture$ or acupoint$ or acupressure).mp.
20 plum blossom needl$.ti,ab.
21 three edged needl$.ti,ab.
22 wrist ankle needl$.ti,ab.
23 (fire needl$ or warming needl$).ti,ab.
24 meridian$.ti,ab.
25 moxibustion.ti,ab.
26 cupping.ti,ab.
27 bloodletting.ti,ab.
28 or/17-27
29 11 and 16 and 28

Appendix 3. AMED OvidSP search strategy

1 Randomized controlled trials/
2 Random allocation/
3 Double blind method/
4 Single-Blind Method/
5 exp Clinical Trials/
6 (clin$ adj25 trial$).tw.
7 ((singl$ or doubl$ or treb$ or trip$) adj25 (blind$ or mask$ or dummy)).tw.
8 placebos/ (506)
9 placebo$.tw.
10 random$.tw.
11 research design/
12 Prospective Studies/
13 meta analysis/
14 (meta?analys$ or systematic review$).tw.
15 control$.tw.
16 (multicenter or multicentre).tw.
17 ((study or studies or design$) adj25 (factorial or prospective or intervention or crossover or cross-over or quasi-experiment$)).tw.
18 or/1-17
19 facial paralysis/
20 facial nerve disease$.mp.
21 ((bell$ or facial$ or hemifacial$ or unilateral$ or nerve$ or cranial$) adj3 (pals$ or paralys$ or paresi$ or spasm$)).mp.
22 or/19-21
23 Acupuncture therapy/
24 (electroacupuncture or electro-acupuncture or acupuncture$ or acupoint* or acupressure).mp.
25 Needles/
26 (needle$ or meridian* or moxibustion or cupping or bloodletting).tw.
27 or/23-26
28 18 and 22 and 27

Appendix 4. LILACS search strategy

((Mh Facial Nerve Diseases OR Mh bell palsy OR Mh facial paralysis OR Mh hemifacial spasm) OR (Bell$ or facial$ or hemifacial$ or unilateral$ or nerve$ or cranial$) AND (pals$ or paralys$ or paresi$ or spasm$)) AND (Mh ACUPUNCTURE OR Mh Acupuncture Therapy OR acupunctur$ OR (needl$ OR point$ OR insertion$)) [Words] and ((Pt randomized controlled trial OR Pt controlled clinical trial OR Mh randomized controlled trials OR Mh random allocation OR Mh double-blind method OR Mh single-blind method) AND NOT (Ct animal AND NOT (Ct human and Ct animal)) OR (Pt clinical trial OR Ex E05.318.760.535$ OR (Tw clin$ AND (Tw trial$ OR Tw ensa$ OR Tw estud$ OR Tw experim$ OR Tw investiga$)) OR ((Tw singl$ OR Tw simple$ OR Tw doubl$ OR Tw doble$ OR Tw duplo$ OR Tw trebl$ OR Tw trip$) AND (Tw blind$ OR Tw cego$ OR Tw ciego$ OR Tw mask$ OR Tw mascar$)) OR Mh placebos OR Tw placebo$ OR (Tw random$ OR Tw randon$ OR Tw casual$ OR Tw acaso$ OR Tw azar! OR Tw aleator$) OR Mh research design) AND NOT (Ct animal AND NOT (Ct human and Ct animal)) OR (Ct comparative study OR Ex E05.337$ OR Mh follow-up studies OR Mh prospective studies OR Tw control$ OR Tw prospectiv$ OR Tw volunt$ OR Tw volunteer$) AND NOT (Ct animal AND NOT (Ct human and Ct animal))) [Words]

Appendix 5. Cochrane Register of Controlled Trials search strategy

#1(Bell* or facial* or hemifacial* or unilateral* or nerve* or cranial*) NEAR (pals* or paralys* or paresi* or spasm*)
#2MeSH descriptor Facial Nerve Diseases explode all trees
#3(#1 OR #2)
#4acupuncture or electroacupuncture or electro-acupuncture or acupoint or acupressure
#5needle* or meridians or moxibustion or cupping or bloodletting
#6(#4 OR #5)
#7(#3 AND #6)

Appendix 6. Chinese Biomedical Retrieval System Database search strategy

(NB. all of the search terms were translated to Chinese terms when we conducted the searches)
1. bell palsy
2. facial nerve paralysis
3. facial spasm
4. cranial nerve paralysis
5. 1-4/or
6. acupuncture
7. acupressure
8. electroacupuncture
9. acupoint
10. needle
11. meridian
12. moxibustion
13. cupping
14. bloodletting
15. 6-14/or
16. random
17. control
18. clinical trial
19. blind procedure
20. placebo
21.16-20/or
22. 5 and 15 and 21

WHAT'S NEW

Last assessed as up-to-date: 23 May 2010.

Date	Event	Description
9 April 2010	New citation required but conclusions have not changed	Change in authorship including a new first author and withdrawal of several authors
19 February 2010	New search has been performed	New search for studies and content updated (no change to conclusions)

HISTORY

Protocol first published: Issue 1, 2001

Review first published: Issue 1, 2004

Date	Event	Description
5 May 2008	Amended	Converted to new review format.
16 August 2007	New citation required and conclusions have changed	Substantive amendment The searches for MEDLINE, EMBASE and the Cochrane Neuromuscular Disease Group Trials Register were updated in April 2006. Three new studies were identified

CONTRIBUTIONS OF AUTHORS

LH designed the protocol, assessed study quality, undertook data collection and analysis and wrote the review.

MZ performed literature search, assessed study quality, undertook data collection and analysis.

NC assessed study quality and undertook data analysis in the update.

DZ contributed to the protocol design and data analysis.

BW gave technical support on acupuncture.

NL assessed study quality and gave technical support on acupuncture.

SY contributed to data collection.

DZ contributed to literature search.

QF contributed to literature search.

JY contributed to study quality assessment.

XZ contributed to study quality assessment.

DECLARATIONS OF INTEREST

No conflict of interest reported.

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- Cochrane Center, China.

External sources

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INDEX TERMS

Medical Subject Headings (MeSH)

Acupuncture Therapy [*methods]; Bell Palsy [drug therapy; *therapy]; Combined Modality Therapy; Randomized Controlled Trials as Topic

MeSH check words

Humans