



Selected Abstracts and Excerpts. 2012

J Acupunct Meridian Stud. 2009 Mar;2(1):34-9. Epub 2009 Apr 7.

The use of auricular examination for screening hepatic disorders.

Cheing GL, Wan S, Lo SK. Department of Rehabilitation Sciences, The Hong Kong Polytechnic University.

Abstract

Researches on auricular acupuncture (AA) have examined mainly its treatment effects. This study aimed to investigate the accuracy and precision of using auricular examination (AE) as a complementary diagnostic tool for screening hepatic disorders. Twenty patients suffering from liver dysfunction and 25 controls aged 18-60 years were recruited from an acute hospital. Participants were examined using three AE methods including visual inspection, electrical skin resistance measurement, and tenderness testing on the liver AA zone of both ears. Significant differences were found in visual inspection and electrical skin resistance on the AA zones between the two groups. Patients suffering from liver dysfunction tended to have at least one abnormality in skin color, appearance, presence of papules, abundance of capillary and desquamation on the ear (Relative Risk-Right ear: RR = 2.9, 95% confidence interval (CI) 1.4, 6.2; Left: RR = 1.8, 95% CI, 1.01, 3.1). The sensitivity for visual inspection was 0.7 for both ears; specificity was 0.76 for the (R) and 0.6 for the (L) ear. The mean difference in electrical skin resistance was 4.3 M Ω (95% CI, 1.7, 6.9) for the (L) ear; 4.5 M Ω (95% CI, 1.5, 7.6) for the (R) ear. Our results suggest that malfunction of the liver appeared to be reflected by the presence of morphological changes on the liver AA zone. Visual inspection and electrical skin resistance on the liver AA zone are potentially sensitive to screen hepatic disorders.

PMID: 20633472 [PubMed – indexed for MEDLINE]

<http://www.auriculo.fr/refbase/show.php?record=4891>

Neurol Sci. 2011 May;32 Suppl 1:S173-5.

Ear acupuncture in the treatment of migraine attacks: a randomized trial on the efficacy of appropriate versus inappropriate acupoints.

Allais G, Romoli M, Rolando S, Airola G, Castagnoli Gabellari I, Allais R, Benedetto C.

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Abstract

Ear acupuncture can be a useful mean for controlling migraine pain. It has been shown that a technique called the Needle Contact Test (NCT) can identify the most efficacious ear acupoints for reducing current migraine pain through just a few seconds of needle contact. The majority of the points were located on the antero-internal part of the antitragus (area M) on the same side of pain. The aim of this study was to verify the therapeutic value of area M and to compare it with an area of the ear (representation of the sciatic nerve, area S) which probably does not have a therapeutic effect on migraine attacks. We studied 94 females suffering from migraine without aura, diagnosed according to the ICHD-II criteria, during the attack. They were randomly subdivided into two groups: in group A, tender points located in area M, positive to NCT were inserted; in group B, the unsuitable area (S) was treated. Changes in pain intensity were measured using a VAS scale at various times of the study. During treatment, there was a highly significant trend in the reduction of the VAS value in group A (Anova for repeated measures: $p < 0.001$), whereas no significance was observed in group B. VAS values were significantly lower in group A than in group B at 10, 30, 60 and 120 min after needle insertion. This study suggests that the therapeutic specificity of auricular points exists and is linked to the somatotopic representation of our body on the ear.

PMID: 21533739

[PubMed – indexed for MEDLINE]



Brain Res. 2011 Jun 23;1397:19-27. Epub 2011 Apr 22.

Acupuncture-like stimulation at auricular point Heart evokes cardiovascular inhibition via activating the cardiac-related neurons in the nucleus tractus solitarius.

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Abstract

Fifty-eight male Sprague-Dawley rats used in the present study to investigate the role of baroreceptor sensitive neurons of the nucleus tractus solitarius (NTS) in the regulation of cardiovascular inhibition during acupuncture at the auricular point Heart, single unit recording was made in anesthetized Sprague-Dawley rats. A neuron was considered to be excited or inhibited by acupuncture stimulation if it displayed 15% more or less spikes s(-1), respectively. NTS neurons were classified into cardiac-related (CR) neurons and non-cardiac-related neurons based on whether their rhythmic discharges were synchronized with the R-waves and responding to sodium nitroprusside (NP; 20 µg/kg, i.v.) administration. Manual acupuncture was applied at the auricular point Heart and somatic acupuncture points ST36 and PC6. Acupuncture at auricular point Heart showed a more significant inhibitory effect on arterial pressure (-22.1±2.4mm Hg; P<0.001) and heart rate (-12.7±1.7 bpm; P<0.001) than that at ST36 and PC6. Acupuncture at auricular point Heart also increased the level of response of CR neurons in the NTS (93.8%±26.0% increase in discharge rate; P<0.01). Systemic or local administration of atropine attenuated the cardiovascular inhibition and activation of CR neurons evoked by auricular acupuncture, but had no effect on the same responses evoked by somatic acupuncture. Inactivation of the NTS with local anesthetics also decreased the cardiovascular inhibitory responses evoked by auricular acupuncture. Our results show that acupuncture at the auricular point Heart regulates cardiovascular function by activating baroreceptor sensitive neurons in the NTS in a similar manner as the baroreceptor reflex in cardiovascular inhibition.

THE JOURNAL OF ALTERNATIVE AND COMPLEMENTARY MEDICINE
Volume 16, Number 10, 2010, pp. 1097–1108

Auriculotherapy for Pain Management: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Abstract

Objectives: Side-effects of standard pain medications can limit their use. Therefore, nonpharmacologic pain relief techniques such as auriculotherapy may play an important role in pain management. Our aim was to conduct a systematic review and meta-analysis of studies evaluating auriculotherapy for pain management. **Design:** MEDLINE, ISI Web of Science, CINAHL, AMED, and Cochrane Library were searched through December 2008. Randomized trials comparing auriculotherapy to sham, placebo, or standard-of-care control were included that measured outcomes of pain or medication use and were published in English. Two (2) reviewers independently assessed trial eligibility, quality, and abstracted data to a standardized form. Standardized mean differences (SMD) were calculated for studies using a pain score or analgesic requirement as a primary outcome.

Results: Seventeen (17) studies met inclusion criteria (8 perioperative, 4 acute, and 5 chronic pain). Auriculotherapy was superior to controls for studies evaluating pain intensity (SMD, 1.56 [95% confidence interval (CI): 0.85, 2.26]; 8 studies). For perioperative pain, auriculotherapy reduced analgesic use (SMD, 0.54 [95% CI: 0.30, 0.77]; 5 studies). For acute pain and chronic pain, auriculotherapy reduced pain intensity (SMD for acute pain, 1.35 [95% CI: 0.08, 2.64], 2 studies; SMD for chronic pain, 1.84 [95% CI: 0.60, 3.07], 5 studies). Removal of poor quality studies did not alter the conclusions. Significant heterogeneity existed among studies of acute and chronic pain, but not perioperative pain.

Conclusions: Auriculotherapy may be effective for the treatment of a variety of types of pain, especially postoperative pain. However, a more accurate estimate of the effect will require further large, well-designed trials.



Treatment of Phantom Limb Pain with Laser and Needle Auricular Acupuncture:

A Case Report

Michael Bradley Jacobs and Richard C. Niemtow. Medical Acupuncture. March 2011, 23(1): 57-60.
doi:10.1089/acu.2010.0785.

Published in Volume: 23 Issue 1: March 18, 2011

Abstract

Background: Amputees often report the sensation of phantom limb pain. Medications and nonpharmacologic therapies do not always improve symptoms.

Objective: To describe treatment of phantom limb pain with laser and needle auricular acupuncture.

Design, Setting, and Patient: A 25-year-old male military amputee with phantom limb pain underwent treatment with laser and needle auricular acupuncture in the fall of 2010. Pain intensity was typically rated from 4/10 to 0/10 during the day and 7/10 in the evening. His medications included methadone, memantine, pregabalin, and oxycodone as needed. Nonpharmacologic therapies included massage, physical therapy, and compression bandage.

Intervention: Auricular acupuncture was performed on the left ear with a low-level laser device (output ≤ 5 mW) at a frequency of 650 nm onto the cingulate gyrus point, with light pressure. The patient was offered needle auricular acupuncture but declined.

Main Outcome Measure: Patient-reported phantom limb pain.

Results: After approximately 30 seconds, the patient reported that the pain was eliminated completely (0/10). He reported that the pain relief lasted approximately 4 hours. The pain then gradually increased. Eight days later, the patient requested additional auricular acupuncture for the same phantom limb pain. The laser device was not available, so needle auricular acupuncture was performed. After 1 minute, the patient reported reduction of his pain (from 9/10 to 5/10). Upon questioning the next day, he reported that his pain remained under satisfactory control.

Conclusions: Acupuncture treatment for phantom limb pain has been described in the literature in a few case reports and case series, but data are limited on the use of laser and needle acupuncture for this purpose. Auricular acupuncture may be a simple, cost-effective, and useful adjunct for the treatment of hospitalized and outpatient amputees with phantom limb pain and should be researched further.

Clinical Oral Investigations. 2012. DOI: 10.1007/s00784-011-0662-4

Published in partnership with the German Society of Dental, Oral and Craniomandibular Sciences

Auricular acupuncture effectively reduces state anxiety before dental treatment—a randomised controlled trial

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<http://www.springerlink.com/content/u708v82w86185441>

Abstract

Objectives

The objective of this study was to analyze whether auricular acupuncture, acupuncture at the outer ear, could reduce state anxiety before dental treatment.

Methods

This prospective, randomized patient-blinded study with 182 patients compared anxiety before dental treatment following auricular acupuncture at the relaxation-, tranquillizer- and master cerebral points (auricular acupuncture group) versus acupuncture at sham points (finger-, shoulder- and tonsil points; sham group) and a non-intervention control group. Anxiety was assessed using the Spielberger State Trait Anxiety Inventory (German version) before auricular acupuncture and 20 min thereafter, immediately before dental treatment.



Results

Auricular acupuncture reduced state anxiety score more effectively from 54.7 ± 10.8 to 46.9 ± 10.4 (mean \pm SD) than sham acupuncture from 51.9 ± 10.2 to 48.4 ± 10.0 . In contrast, state anxiety in the control group increased from 51.0 ± 11.7 to 54.0 ± 11.6 (mean increase $+3.0$; CI $+4.7$ to $+1.2$). The decrease in state anxiety in both intervention groups was statistically significant ($p < 0.001$) when compared to the non-intervention control group. After correcting for group differences in baseline state anxiety, the reduction in anxiety was -7.3 score points (CI -9.0 to -5.6) in the auricular acupuncture group and -3.7 score points (CI -5.4 to -1.9) in the sham group ($p = 0.008$).

Conclusion

Auricular acupuncture, a minimally invasive method, effectively reduces state anxiety before dental treatment. Auricular acupuncture could be an option for patients scheduled for dental treatment, who experience an uncomfortable degree of anxiety and request an acute intervention for their anxiety.

An Open Trial of Auricular Acupuncture for the Treatment of Repetitive Self-Injury in Depressed Adolescents

The Canadian Child and Adolescent Psychiatry Review Feb. 2003 (12): 1
Dr. Mary Kay Nixon, Mental Health PSU, Children's Hospital of Eastern Ontario, Ottawa.

ABSTRACT:

Repetitive self-injurious behavior (SIB) is frequently seen in depressed adolescents. In addition to it providing relief for dysphoric symptoms there is evidence of an addictive component to this behaviour. Because auricular acupuncture (AA) has been shown to be effective as an adjunct treatment to cocaine dependence, we wished to test the feasibility and potential efficacy of this treatment in depressed adolescents with repetitive SIB. Our pilot results suggest that AA is an acceptable treatment in this group and that it may be an effective adjunct treatment for repetitive SIB. Moreover, decreases in SIB were evident while depressive symptoms remained unchanged.

SIB in the non developmentally delayed population often develops during adolescence, can be highly repetitive and comorbid with mood disorders and is frequently difficult to treat. The act of self-injury is often preceded by intense feelings of dysphoria mixed with anxiety and/or anger (Favazza & Rosenthal; 1993). Upon cutting, hospitalized adolescents frequently report a release of tension and relief from negative affective states, reinforcing the behaviour. Addictive features, such as increasing the frequency and/or severity of SIB to achieve the same effect since starting have been noted in this behavior.

METHOD:

Nine adolescents from our inpatient and partial hospitalization programs meeting DSM-IV criteria for a major depressive episode and/or dysthymia and a Beck Depression Inventory (BDI) score of greater than 16 who admitted to repetitive SIB and/or repetitive urges to self-injure (at least 1/week in the past 6 months) participated in the pilot study. The mean age at screening was 15.7 ± 1.5 (8 females and 1 male). Exclusion criteria included any developmental delay, psychosis, active suicidal ideation, substance dependence, acute medical illness, pregnancy, treatment with an opioid antagonist, and allergy to metal or needle phobia.

Acupuncture treatment consisted of 3 treatments, once a week over 3 weeks. Patients would sit together and were instructed to relax while receiving bilateral AA at 5 points (Sympathetic, Shen Men, Kidney, Liver, Lung) as per the original Lincoln protocol (Smith, 1979). The acupuncturist was instructed to have minimal interaction during treatment but the adolescents were permitted to talk. The disposable needles remained in place for 50 minutes and when removed were replaced with adhesive metallic press balls at the same 5 ear sites. Patients were instructed to press on one or several of these balls between acupuncture sessions to see if this may assist in diminishing the urge to self-injure. The addition of press balls and reduction from 5 days a week to once a week needle treatments were modifications made to the Lincoln protocol due to concerns that adolescents would not be compliant.



DISCUSSION:

These pilot results suggest that AA was accepted and well tolerated in depressed adolescents with SIB. Where repetitive self-injury occurs with addictive features, AA may be a useful adjunct to standard treatments. The fact that SIB urges and/or acts were reduced despite any significant change in levels of depression suggests that any potential “active ingredient” in AA did not target depressive symptoms. The experience of internalized anger and its relationship to SIB and AA merits further exploration.

Auricular acupuncture with its relatively low cost, tolerability, ease of administration, and favorable side effect profile deserves further investigation as a potential adjunct treatment for repetitive selfinjury in depressed adolescents. While AA mechanism(s) of action have yet to be clearly elucidated, any potential efficacy in the treatment of SIB should be explored. Pursuing this could lead to better understanding the effects of AA as well as any underlying biological aspects related to the development and maintenance of repetitive SIB.

Hindawi Publishing Corporation

Evidence-Based Complementary and Alternative Medicine

Volume 2012, Article ID 615476, 5 pages doi:10.1155/2012/615476

Auricular Acupuncture May Suppress Epileptic Seizures via Activating the Parasympathetic Nervous System: A Hypothesis Based on Innovative Methods

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Auricular acupuncture is a diagnostic and treatment system based on normalizing the body’s dysfunction. An increasing number of studies have demonstrated that auricular acupuncture has a significant effect on inducing parasympathetic tone. Epilepsy is a neurological disorder consisting of recurrent seizures resulting from excessive, uncontrolled electrical activity in the brain. Autonomic imbalance demonstrating an increased sympathetic activity and a reduced parasympathetic activation is involved in the development and progress of epileptic seizures. Activation of the parasympathetic nervous system such as vagus nerve stimulation has been used for the treatment of intractable epilepsy. Here, we propose that auricular acupuncture may suppress epileptic seizures via activating the parasympathetic nervous system.

1. Introduction

Epilepsy is a neurological disorder consisting of recurrent seizures resulting from excessive, uncontrolled electrical activity in the brain. Despite active pharmacological and neurosurgical treatments used for the treatment of epileptic disorders, the management of medically intractable epilepsy remains a difficult problem.

Over the past two decades, concerns regarding the side effects of pharmacological and neurosurgical approaches have increased interest in the use of complementary and alternative medicine (CAM). Autonomic imbalance is involved in the development and progress of epileptic seizures. Auricular acupuncture can treat diseases by increasing parasympathetic tone. Here, we propose that auricular acupuncture may suppress epileptic seizures via activating the parasympathetic nervous system.

2. Auricular Acupuncture Can Increase Parasympathetic Tone

Auricular acupuncture is a diagnostic and treatment system based on normalizing the body’s dysfunction which is suggested to stimulate the peripheral reflexes, then activate these central brain pathways, and thus inhibit the maladaptive reflexes that contribute to neuropsychic disorders. Auricular acupuncture was utilized to treat postoperative pain, improve neurorehabilitation, insomnia, and obesity via modifying endorphinergic systems and the autonomic nervous system (ANS).

An increasing number of studies have demonstrated that auricular acupuncture has a significant effect on inducing parasympathetic tone. Manual ear acupressure at “heart” auricular acupoint induced a significant decrease in heart rate and a significant increase in heart rate variability total. Acupuncture on auricular



acupoint “Shenmen” might calm the mind, slow down the heart rate, activate the parasympathetic nerves, and inhibit the sympathetic nerves.

Acupuncture conducted on the concha of the ear induces an increase in vagal activity. During needling vision-related acupoints of ear acupuncture, mean blood flow velocity of the ophthalmic artery was significantly increased which may be induced by parasympathetic tone. Another clinical study showed that stimulation of the ear induced a significant increase in the parasympathetic activity during the stimulation period of 25min and during the poststimulation period of 60min.

The external ear is innervated by several nerves, including vagus nerve, glossopharyngeal nerve, trigeminal nerve, facial nerve, and branches (the second and third) of the cervical spinal nerves. The auricular branch of vagus nerve (ABVN) innervates the auricular concha and the external auditory meatus. Parasympathetic tone such as Arnold’s reflexes has been clinically observed after stimulating innervation regions of the ABVN, which is considered as a bridge between the external ear and the internal organs. Auricular acupoints related to internal organs are located at the auricular concha.

3. Epilepsy Is Associated with Decreased Parasympathetic Tone

Autonomic symptoms accompany all generalized tonicclonic seizures (GTC) and one-third of simple partial seizures. The ANS centers can be involved in complex partial, absence, and generalized tonic seizures. Measurements of ANS functions may be helpful in differentiating between epileptic seizures and nonepileptic psychogenic seizures.

The autonomic imbalance of epileptic seizures probably results from the hypersynchronized electrical impulse from the temporal and frontal areas to the limbic system, then to autonomic central nuclei in medulla including the nucleus tractus solitarius (NTS) and ambiguus nuclei. Both sympathetic and parasympathetic efferent discharges are then generated. There is ample experimental and clinical proof that epilepsy goes along with autonomic imbalance demonstrating an increased sympathetic activity and a reduced parasympathetic activation. Novak et al. documented rapid parasympathetic withdrawal approximately 30 seconds before seizure onset and a sympathetic activation peak at seizure onset. Temporal lobe epilepsy is known to be associated with ictal and interictal autonomic dysregulation, predominantly with sympathetic overactivity. Higher sympathetic function and lower parasympathetic function have been demonstrated to be significant risk factors for sudden unexplained death in epilepsy subjects.

Activation of the parasympathetic nervous system (PNS) has shown therapeutic benefits in brain diseases. Examples include vagus nerve stimulation (VNS) for epilepsy. VNS has been successfully applied for more than 20 years to treat drug-resistant epilepsy. The antiseizure effect of VNS is considered to be mediated via vagal afferent projections to the NTS, then from the NTS to different brain regions which correlate with the pathogenesis of epilepsy [25]. Recently, VNS has also been applied for treatment of drug-resistant depression and was suggested as a new approach for the treatment of heart failure and stroke by increasing the parasympathetic tone.

4. Hypothesis

Auricular acupuncture appears to modify the autonomic dysfunction by increasing parasympathetic activity. Thus, we hypothesize that auricular acupuncture may suppress epilepsy by increasing parasympathetic tone. We have done clinical trials and animal experiments on the effect and mechanism of auricular electroacupuncture for the treatment of epilepsy. In clinical trials, auricular electroacupuncture reduced seizure frequency and attenuated seizure severity. Animal results showed that auricular electroacupuncture suppressed epileptic discharges in electroencephalogram traces. All the results support our hypothesis.

5. The Mechanism of Auricular Acupuncture for Epilepsy

Most nerves innervating the external ear carry parasympathetic nerve fibers. Moreover, the ABVN is the only peripheral branch of the vagus nerve. Acupuncture at auricular acupoints especially in the area of auricular concha may induce vagal tone to suppress epileptic seizures.

As the main vagal afferent, the NTS is considered as a neuroanatomical center for pathways of the antiseizure effect of auricular acupuncture. Amelioration of illness by auricular acupuncture is believed to be through the reticular formation which is found to be histopathologically connected with focal-cortical seizure-induced generalized convulsive status epilepticus. Recent findings highlight the possibility of inflammation in seizures and epileptogenesis, signaling brain activity. The anti-inflammation effect perhaps is the mechanism of auricular acupuncture for epilepsy.



<http://www.icamar.org/icamar10/spip.php?article8>

Monitoring the diagnosis of auricular points : contrasting the performance of the VAS and the electrical detector

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Introduction and object of this presentation This work is in response to a request made by Prof. Youenn Lajat that the VAS (Nogier's pulse) be validated. At the time, Prof. Lajat was the national chairperson for the teaching of acupuncture at the university level in France. In fact, he was the national president of the Coordination Committee for the inter-University diploma (D.I.U.) in acupuncture. Posing a diagnosis on an auricular point using the VAS presents a major bias : it is a human-on-human reading involving an important subjective aspect. In clinical practice, the validity of an auricular point on a patient is observed if there exists a significant impedance variation (complex electrical resistance) between the point examined and its immediate environment. This reading is more objective as long as one knows well the limitations of the instrument used. Establishing statistical correlations between two detection approaches (the VAS and electrical differential detection) may make it possible to validate auricular point diagnosis using Nogier's pulse.

Methodology Manual recognition of the VAS is well documented. It has been demonstrated. After 20 years of practice, we have retained the most reliable auricular stimulations among those demonstrated by Paul Nogier in the course of his productive mentorship. Electrical detection has been demonstrated. For the purpose of this research, we have used European Community-standard medical devices approved in France for all general practitioners to use as needed in clinical setting. A blind study, of 241 points was conducted.

▶ of the 186 auricular points detected by Heine lamp: 120 registered a strong impedance drop, 53 registered a weak drop. A total of 93% of these points showed an impedance drop.

▶ of 173 auricular points detected by scanning the auricle with the white tip of the Black & White Detector: 116 points showed a strong impedance drop, 38 showed a weak impedance drop for a total of 89% of the points showing an impedance drop.

▶ in 2009, a new ongoing study, allowed us to flesh out the results observed on the auricular points detected by using the Heine lamp.

Discussion

▶ in our 2008 and 2009 studies, we strived to avoid the bias by beginning in the blind and using the most subtle tests first, and by ending our experiment with electrical-detection proving.

Conclusion

▶ a large portion of the points detected by the VAS are subtle. These are found to show an impedance drop less noticeable than in points sensitive to painful pressure.

▶ detection by the VAS is not some notion of the mind. In our opinion, it statistically appears to be valid.

▶ the effectiveness of Auriculomedicine is evidence-based ; it can be proven with the right level of testing.