

MEDICINA INTEGRATA, TRA CLINICA E SCIENZA

**Asti, Sede Ordine dei Medici Chirurghi e degli Odontoiatri – Via Goito n. 12
Sabato 1° marzo 2025 ore 8,30**



**POSSIBILITÀ E LIMITI
DELL'AGOPUNTURA
NELLA PREVENZIONE
DELL'EMICRANIA**

Dr. Marco Aguggia

Direttore SC Neurologia

Asti

Al 25 febbraio 2025 sono recensite in
Medline, la principale base di dati
biomedica

48.232

pubblicazioni

ACUPUNCTURE

*L'agopuntura è la terapia di
profilassi più utilizzata al mondo
per le cefalee primarie*



Research hotspots and trends on acupuncture treatment for headache: a bibliometric analysis from 2003 to 2023

Shun Zhao¹, Songfeng Hu², Yujing Luo¹, Wangjun Li¹,
Fenfen Zhao², Changkang Wang², Fanlei Meng² and
Xingwei He^{2*}

- Web of Science (CiteSpace, VOSviewer, Bibliometrix)
- 808 research
- Most cited reference: «Effect of Acupuncture for Migraine Prophylaxis a RCT trial»
- Most researched type: «Migraine»
- **Conclusion: Acupuncture treatment for headaches has established a stable trend with a promising development trajectory**

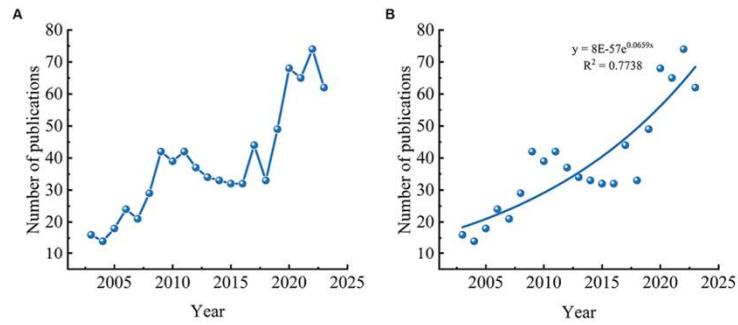


FIGURE 2
 (A) The annual number of publications related to acupuncture treatment on headache. (B) Model fitting curves of growth trends and prediction of publications numbers in the future.

TABLE 1 The top 5 countries/regions related to acupuncture treatment on headache.

Rank	Country/regions	Counts	Centrality	Proportion (%)
1	China	309	0.26	
2	United States	224	0.33	
3	Germany	101	0.22	
4	England	64	0.22	
5	Italy	47	0	

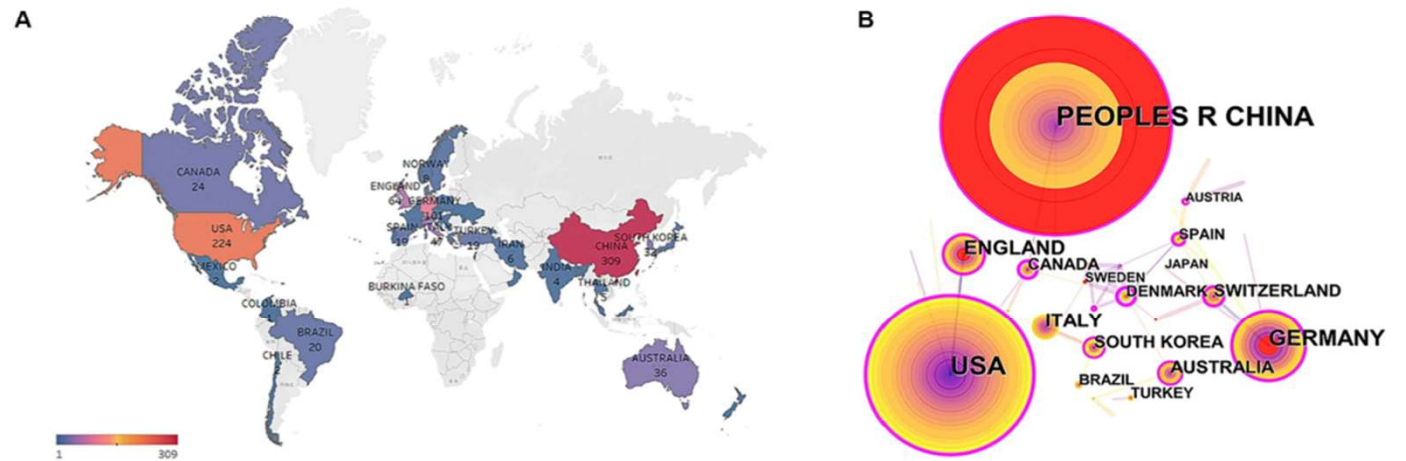
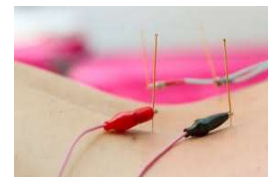


FIGURE 3
 (A) World map based on the total publications of different countries/regions. (B) Network map of co-authorship between countries/regions related to acupuncture treatment on headache.

Tipi di agopuntura:

- **agopuntura somatica**
- **agopuntura auricolare**
- **craniopuntura**
- **agopuntura addominale**
- **elettro-agopuntura**
- **laser-agopuntura**
- **auricoloterapia**

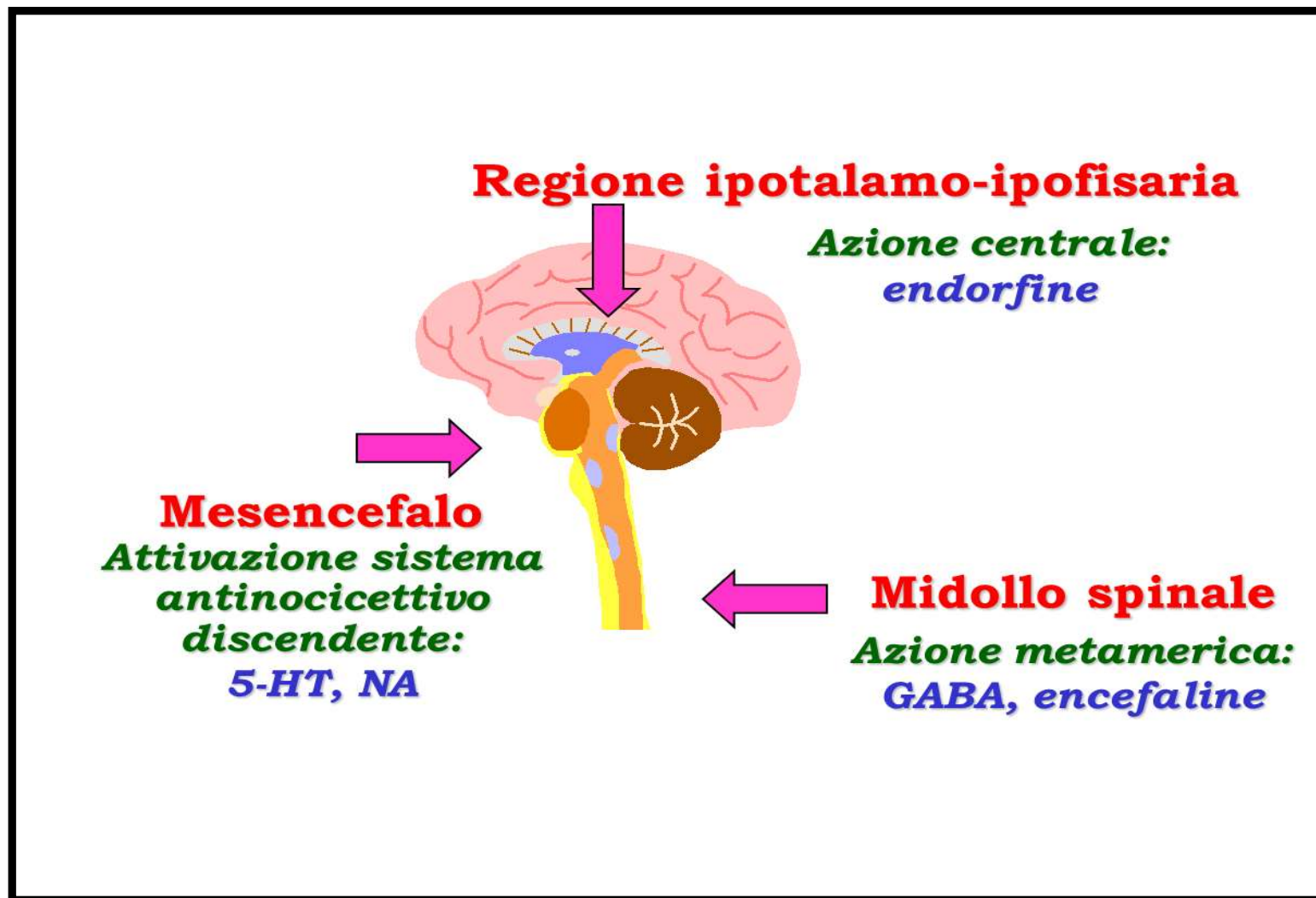


La grande varietà di applicazioni è basata su una grande varietà di effetti, quali:

- ***vasomodulatore-trofico***
- ***antiinfiammatorio***
- ***decontratturante-miorilassante***
- ***sedativo***
- ***regolatore neuroendocrino***
- ***antalgico***



ACUPUNCTURE

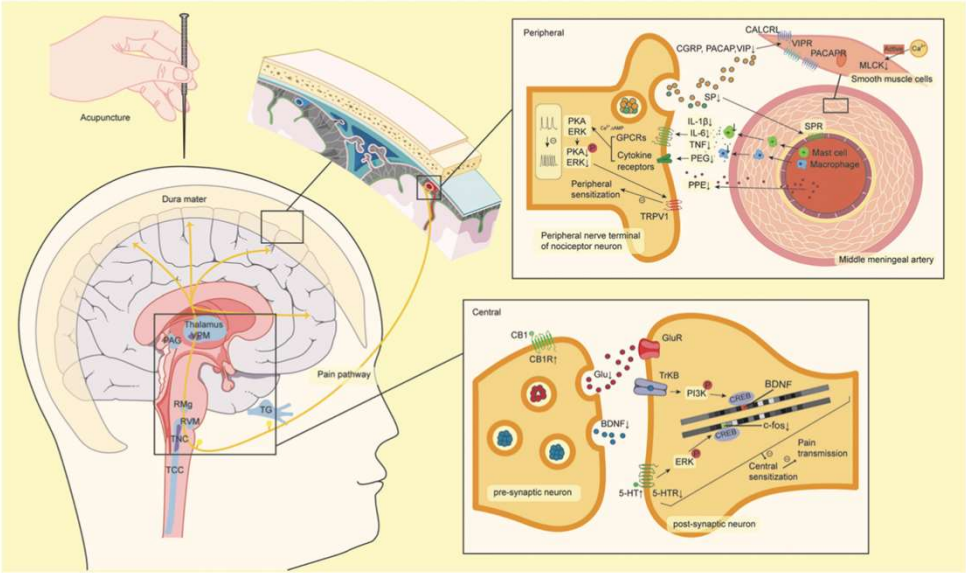


Therapeutic applications and potential mechanisms of acupuncture in migraine: A literature review and perspectives

Front. Neurosci. 16:1022455.
doi: 10.3389/fnins.2022.1022455

Ying Chen[†], Yuhan Liu[†], Yine Song, Shaoru Zhao, Bin Li, Jingqing Sun and Lu Liu*

Department of Acupuncture and Moxibustion, Beijing Hospital of Traditional Chinese Medicine, Beijing Key Laboratory of Acupuncture Neuromodulation, Capital Medical University, Beijing, China



- The exact biochemical and neural mechanisms underlying acupuncture analgesia **remain unclear**, although there are little evidence of acupuncture preventing neuroinflammation and relieving neuronal sensitization.
- AP may have the capacity to **moderate neuroinflammation** by reducing the release of trigeminal-activated neuropeptides (CGRP, SP, PACAP), inhibiting dural immune cells (macrophages and mast cells), downmodulating inflammatory related mediator levels (PG2, IL-β, COX2, IL-6, TNF)
- AP may have the capacity to **reduces neuronal sensitization** by reducing cytokine level (BDNF, glutamate); relieving neuronal activation in migraine-related brain areas and modulating endocannabinoid and serotonin system

The immunomodulatory mechanisms for acupuncture practice

Frontiers in Immunology

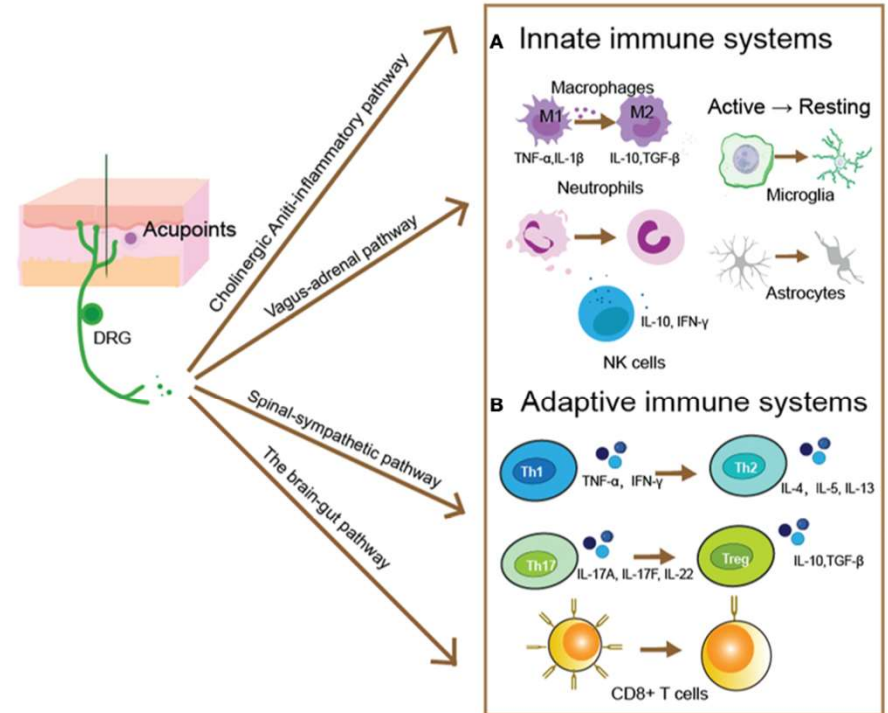
Meng Wang, Weili Liu, Jiayi Ge and Shenbin Liu*

TYPE Review

PUBLISHED 06 April 2023

DOI 10.3389/fimmu.2023.1147718

The system physiology approaches that emerge in western countries in recent years echo the holistic view of ancient Traditional Chinese Medicine (TCM) practices that deal with the root, rather than only the symptoms of diseases. Particularly, TCM practices, including acupuncture, emphasize the mobilization of self-healing mechanisms to bring back body homeostasis. Acupuncture has been practiced for over two thousand years to modulate body physiology via stimulation at specific body regions (acupoints). With the development of various research on acupuncture therapy, its regulatory effect on the immune system has been gradually recognized, especially on immunological diseases, including infectious and allergic diseases. In this study, we reviewed the immunomodulatory mechanism of acupuncture and systematically integrates existing research to respectively elucidate the modulatory mechanisms of acupuncture on the innate immune system, adaptive immune system, and well-known neuroanatomical mechanisms, including intact somatosensory-autonomic reflex pathway. With the advances made in recent systems physiology studies, we now have a great opportunity to gain insight into how acupuncture modulates immunity, and subsequently improves its efficacy.



CLASSIFICAZIONE CEFALEA IN MEDICINA CINESE

Cefalea vascolare

- Fuga di yang del fegato
- Fuoco di fegato
- Stasi di sangue

*Deficit di sangue di fegato
Deficit di yin di fegato
Deficit di yin di rene e fegato +
deficit di yang di rene*

Tan- Umidità

Cefalea di tipo tensivo

- Stasi Qi di fegato
- Deficit di Qi
- Deficit di sangue
- Deficit Yin fegato e rene
(e yang di rene)

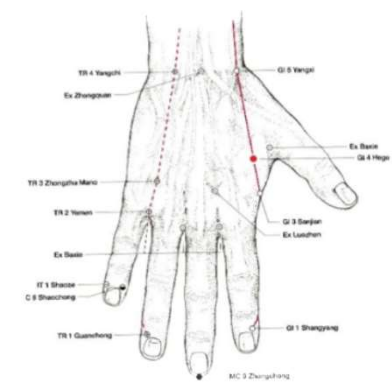
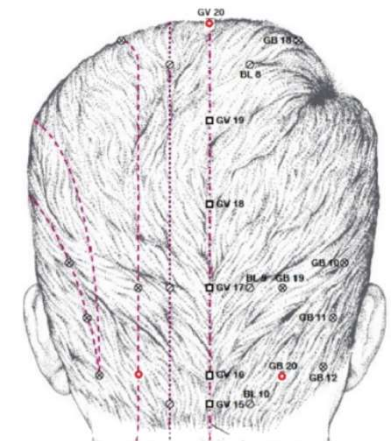
Fuoco di fegato

Fuga di yang di fegato

Fonte: Dott. PE Quirico

Punti maggiormente impiegati in campo neurologico:

- **ST 36 Zusanli**
- **GV 20 Baihui**
- **GB 20 Fengchi**
- **GB 34 Yanglingquan**
- **GB 39 Xuanzhong**
- **LI 4 Hegu**



Quirico PE – Pedrali T
Punti e meridiani di Agopuntura – Testo atlante
CEA ed.

**AGOPUNTURA VS
PROFILASSI
FARMACOLOGICA**

Puncturing the myths of acupuncture

Molly J. Mallory, Alexander Do, Sara E. Bublitz, Susan J. Veleber, Brent A. Bauer, Anjali Bhagra

Journal of Integrative Medicine September 2016, Vol.14, No.5



Science Press

1. Acupuncture only treats pain
2. Acupuncture is painful
3. Acupuncture have minimal education or medical knowledge
4. Acupuncture only works through a placebo effect
5. Acupuncture treatment puts me at risk for infection
6. Serious injury can occur with acupuncture treatment
7. I cannot have acupuncture if I am taking an anticoagulant medication
8. Acupuncture is not safe during pregnancy
9. Acupuncture works after a single treatment
10. I have to choose between acupuncture and my traditional medical treatment. I cannot do both

CONCLUSIONS



The available studies also suggest that acupuncture is **similarly effective as, or even more effective than, prophylactic drug treatment**, and that **it has fewer side effects**.

Acupuncture has to be considered **an effective treatment option** for patients willing to undergo this treatment.



Acupuncture vs. Pharmacological Prophylaxis of Migraine: A Systematic Review of Randomized Controlled Trials

**Carlo Maria Giovanardi^{1*}, Michela Cinquini², Marco Aguggia³, Gianni Allais⁴,
Manuela Campesato⁵, Sabina Cevoli⁶, Fabio Gentili⁷, Annunzio Matrà⁸ and Silvia Minozzi²**

¹ Italian Federation of Acupuncture Societies, Bologna, Italy, ² Laboratory of Clinical Research Methodology, Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy, ³ SOC Neurologia e Centro Cefalee, Ospedale Cardinal Massaia, Asti, Italy, ⁴ Department of Surgical Sciences, Women's Headache Center, University of Turin, Turin, Italy, ⁵ UO Anaesthesia and Pain Therapy Unit Melotti, Department of Emergency and Urgency, Ferrara, Italy, ⁶ IRCCS, Istituto delle Scienze Neurologiche di Bologna, Bologna, Italy, ⁷ General Practitioner, Specialist in Internal Medicine, Bologna, Italy, ⁸ General Practitioner, Bologna, Italy

***Quale efficacia e sicurezza ha
l'agopuntura comparata alle
terapie farmacologiche di
profilassi in pazienti adulti
sofferenti
di emicrania episodica
o cronica?***



PICO

P - problem/patient/population
(problema/ paziente/popolazione)

I - intervention
(intervento)

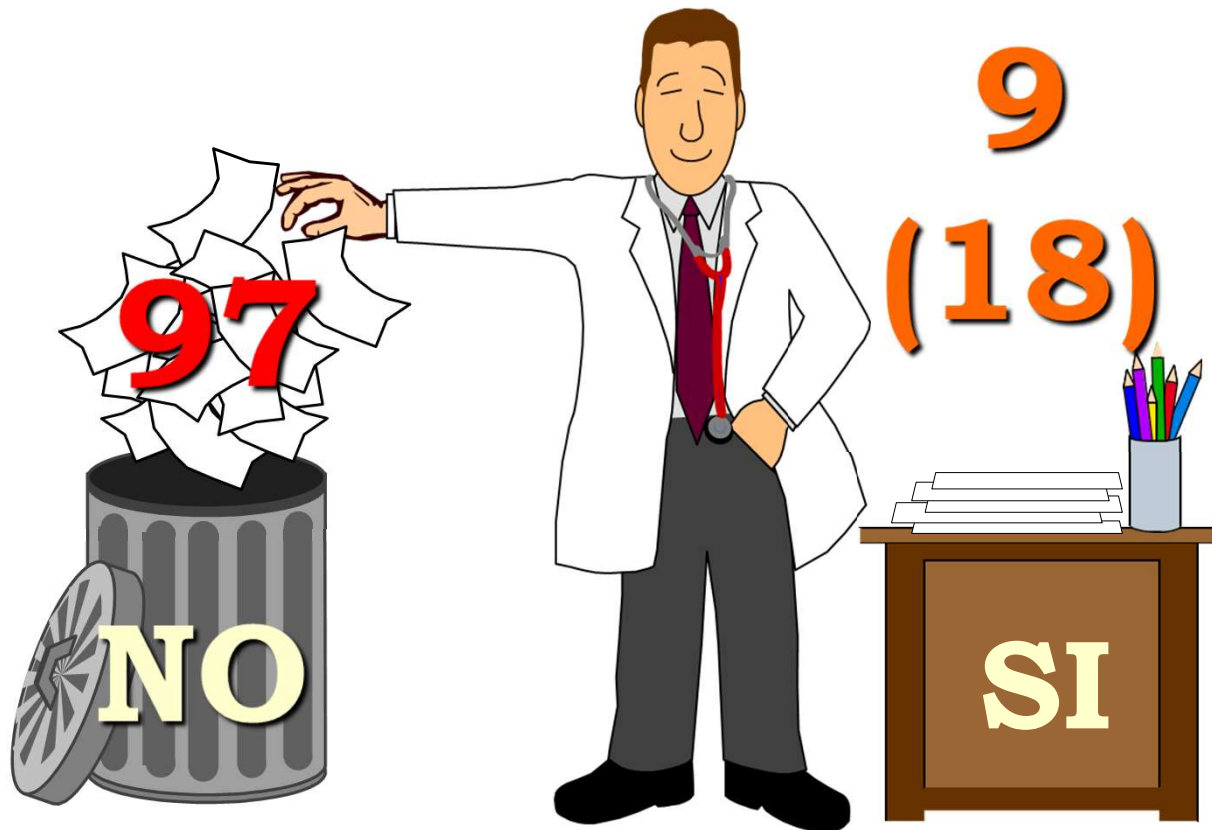
C - comparison/control
(confronto/controllo)

O - outcome
(esito)

OUTCOMES PRIMARI

- **Numero giorni/mese con emicrania**
- **Percentuale di risposta ($\geq 50\%$ frequenza)**
- **Intensità del dolore**
- **Drop-out per qualsiasi motivo**
- **Drop-out per eventi avversi**

**SU 115 STUDI
PRESENTI IN LETTERATURA
QUANTI SONO STATI GIUDICATI
CORRETTI E VALUTABILI?**



97

NO

**9
(18)**

SI

**N° TOTALE
PAZIENTI
INCLUSI:
1484**

**DURATA
MEDIA
11 sedute**



Acupuncture vs. Pharmacological Prophylaxis of Migraine: A Systematic Review of Randomized Controlled Trials

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¹ Italian Federation of Acupuncture Societies, Bologna, Italy, ² Laboratory of Clinical Research Methodology, Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milan, Italy, ³ SOC Neurologia e Centro Cefalee, Ospedale Cardinal Massaia, Asti, Italy, ⁴ Department of Surgical Sciences, Women's Headache Center, University of Turin, Turin, Italy, ⁵ UO Anaesthesia and Pain Therapy Unit Melotti, Department of Emergency and Urgency, Ferrara, Italy, ⁶ IRCCS, Istituto delle Scienze Neurologiche di Bologna, Bologna, Italy, ⁷ General Practitioner, Specialist in Internal Medicine, Bologna, Italy, ⁸ General Practitioner, Bologna, Italy

I dati hanno confermato i precedenti lavori, attestando una moderata maggiore efficacia dell'agopuntura rispetto alla terapia farmacologica preventiva, con un profilo di sicurezza nettamente maggiore nel caso dell'agopuntura.

- **9 studi randomizzati, 1484 pazienti affetti da emicrania sia episodica sia cronica**
- **agopuntura vs terapia farmacologica**
- **età media 39.5 anni**
- **13 gg emicrania/mese**
- **durata media trattamento: 11 settimane**

GRADE

La certezza delle prove è stata valutata secondo **l'approccio GRADE** che considera non solo il rigore metodologico degli studi, ma anche altre dimensioni importanti, quali la similarità dei pazienti inclusi negli studi con quella che normalmente si incontra nella pratica clinica, la consistenza dei risultati dei singoli studi, la precisione della stima complessiva di efficacia, il rischio di bias di pubblicazione.

Ha **quattro livelli** di evidenza:

VERY LOW, LOW, MODERATE, HIGH

EMICRANIA
EPISODICA E
CRONICA

CONCLUSIONI



Sulla base di una **moderata** certezza di
di evidenza, l'Agopuntura nella
profilassi dell'emicrania è

- **lievemente più efficace** e
- **molto più sicura**

delle terapie farmacologiche.

A Randomized Clinical Trial on Acupuncture Versus Best Medical Therapy in Episodic Migraine Prophylaxis: The ACUMIGRAN Study

Giulia Giannini^{1,2}, Valentina Favoni², Elena Merli¹, Marianna Nicodemo², Paola Torelli³, Annunzio Matrà⁴, Carlo Maria Giovanardi⁴, Pietro Cortelli^{1,2}, Giulia Pierangeli^{1,2} and Sabina Cevoli^{2*}

- **135 pts**, consecutively recruited, randomized, controlled,
- The first one comparing acupuncture with the more appropriate pharmacological treatment for migraine prophylaxis
- Group A (69 pt): 12 sessions of AP
- Group B (66): most appropriate medication for 4 months (beta blockers, flunarizine, topiramate, pizotifene, valproic acid, duloxetine, riboflavine)

- **Migraine days/month, migraine attacks, and number of acute medication significantly decreased without differences in group A and B**
- 15.5% of patients (21/135) interrupted the treatment, especially pharmacological
- **Improvement persisted in 57.3% after 3 months and in 38.8% after 6 months**
- 33% and 25.4% required prophylaxis therapy at 3 and 6 months follow-up visits, respectively
- **Acupuncture could be adopted as migraine prophylaxis («at least non inferior») and seem to be slightly superior to pharmacological treatment in compliance and rate of adverse events**
- Lack of blindness of patient and neurologist

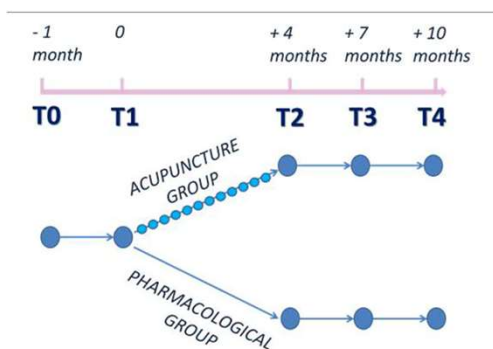


FIGURE 1 | Study design.

The durable effect of acupuncture for episodic migraine: a systematic review and meta-analysis

Hangyu Shi^{1,2†}, Runyu Miao^{2,3†}, Shuai Gao¹, Lili Zhu¹, Jiufei Fang¹
and Zhishun Liu^{1*}

- 15 RCT
 - 3,035 patients
 - PICO method 45
1. **AP vs sham**
 2. **AP vs waitlist**
 3. **AP vs medication (flunarizine, metoprololo)**

AP was significantly better than sham acupuncture, waitlist, and flunarizine in reducing the number of days with migraine per month and migraine attacks per month at **3 months** after treatment

THE THERAPEUTIC SUCCESS OF ACUPUNCTURE FOR EPISODIC MIGRAINE LASTED FOR AT LEAST 3 MONTHS AFTER DISCONTINUATION OF TREATMENT

EVIDENZE STRUMENTALI

ACUPOINT-SPECIFIC FMRI PATTERNS IN HUMAN BRAIN

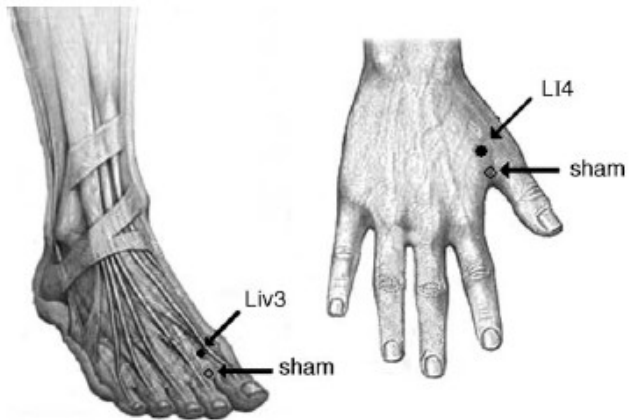


Fig. 1. Anatomical locations of the stimulation points: Liv3, LI4 and nearby sham acupoints (non-acupoints).

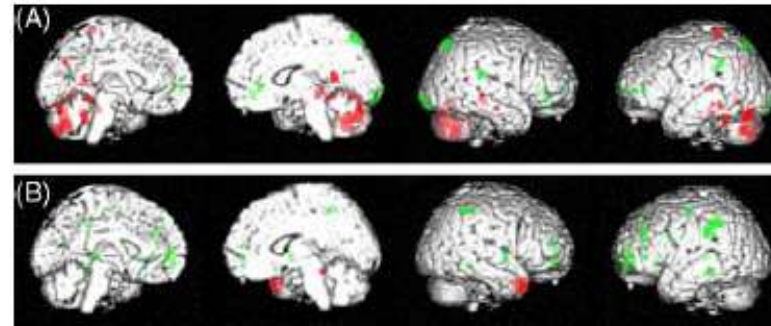


Fig. 2. (A) Activation areas of the real acupoint Liv3 in contrast to the nearby sham acupoint, and (B) LI4 in contrast to a nearby sham acupoint. Red denotes activated areas and green denotes deactivated (decrease of signal intensity change) areas.

Changes in brain connectivity linked to multisensory processing of pain modulation in migraine with acupuncture treatment

NeuroImage: Clinical 36 (2022) 103168

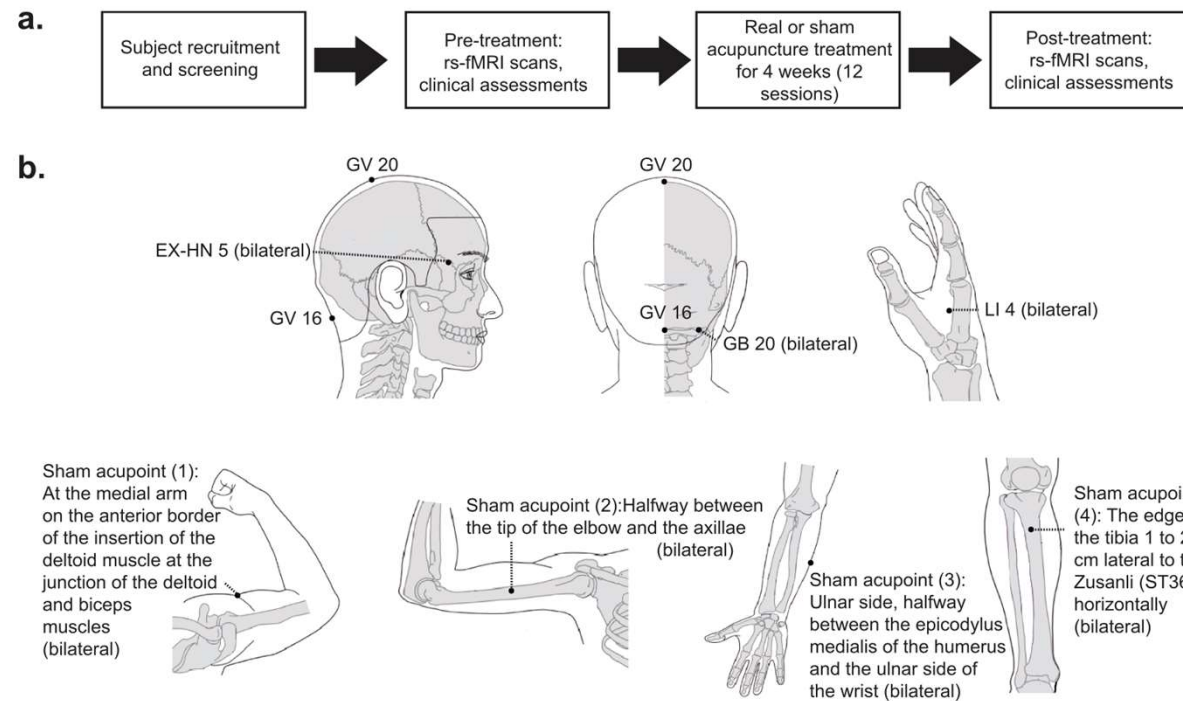


Fig. 1. Study overview. (a) The procedure for the study including subject recruitment and screening, pre-treatment (resting-state fMRI scans, clinical assessments), real or sham acupuncture treatment 4 weeks and post-treatment (resting-state fMRI scans, clinical assessments). (b) The location of real acupoints and sham acupoints. Real acupoints (bilateral EX-HN 5, bilateral GB 20, bilateral LI 4, GV 20 and GV 16). Sham acupoints (superficial skin penetration treatment over non-acupoints). Abbreviations: EX-HN 5, Taiyang (Extra point head and neck 5); GV 20, Baihui (Governor 20); GV 16, Fengfu (Governor 16); GB 20, Fengchi (Gallbladder 20); LI 4, Hegu (Large intestine 4).

FIVE PAIN MODULATION-RELATED KEY REGIONS

- Right Amygdala
- Left insula
- Left medial orbital superior frontal gyrus
- Left occipital medial gyrus
- Right middle-cingulate cortex



Modulation of exteroceptive suppression periods in human jaw-closing muscles by local and remote experimental muscle pain

Kelun Wang^a, Peter Svensson^{a,b,*}, Lars Arendt-Nielsen^a

^aCenter for Sensory-Motor Interaction, Orofacial Pain Laboratory, Aalborg University, Fredrik Bajers Vej 7 D-3, DK-9220 Aalborg S, Denmark
^bDepartment of Prosthetic Dentistry and Stomatognathic Physiology, Royal Dental College, University of Aarhus, Aarhus, Denmark

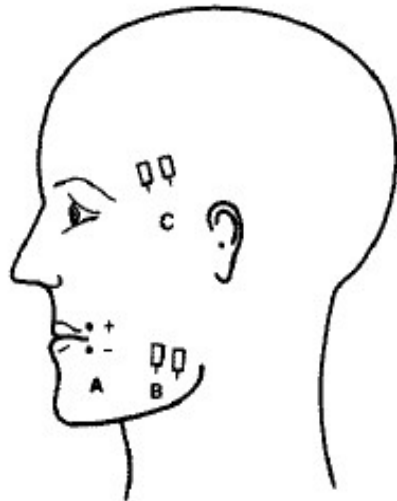


Fig. 1. Placement of stimulation and recording electrodes. A = stimulation at the labial commissure; B = recording over the masseter muscle; C = recording over the temporal muscle.

Inibizione riflessa della contrazione muscolare volontaria occlusale-masticatoria in risposta a stimolazione elettrica o meccanica della mucosa orale, dei denti o della cute nelle aree innervate dal nervo mentale (RIFLESSO PROTETTIVO)

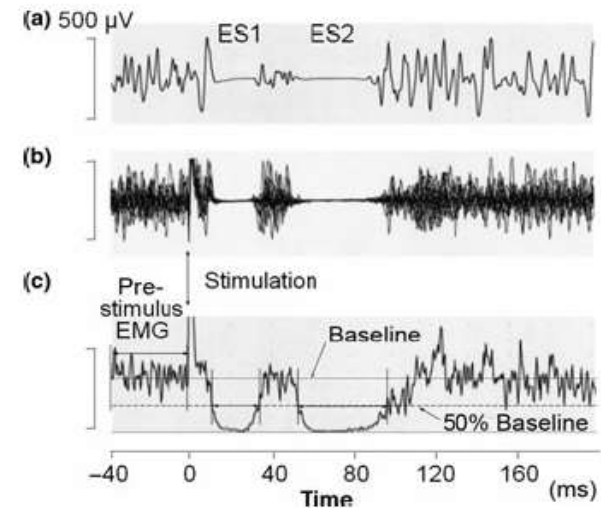


Fig. 1. Example of typical ES1 and ES2 recorded from the left temporal muscle. (a) Raw single electromyogram (EMG) wave with ES1 and ES2 as recorded. (b) Eight waves superimposed. (c) Absolute average of eight ES1 and ES2 waves, with electrical stimulation delivered at time 0. Horizontal lines indicate 50% of pre-stimulus mean EMG amplitude. Vertical cursors indicate onset and offset of ES1 and ES2. The duration was measured as time from onset until offset. ES, exteroceptive suppression.



Change in the second exteroceptive suppression period of the temporalis muscle during erenumab treatment

Eugenia Rota¹ · Marco Aguggia² · Paolo Immovilli³ · Nicola Morelli³ · Davide Renosio¹ · Andrea Barbanera⁴

Received: 21 September 2021 / Accepted: 28 January 2022 / Published online: 18 February 2022

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Conclusion

To the best of our knowledge, this is the first time that the exteroceptive suppression period (ES2) of temporalis muscle has been reported to show a decrease in duration and latency during erenumab treatment. The study of ES2 would be a useful tool to investigate the effect monoclonal antibodies have at a neurophysiological level.



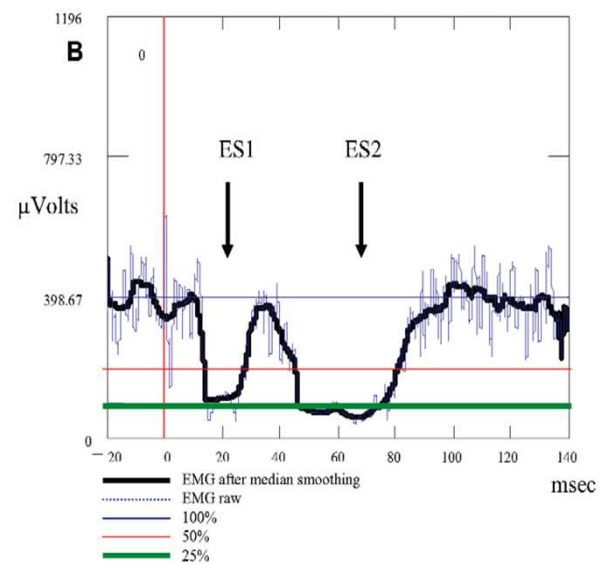
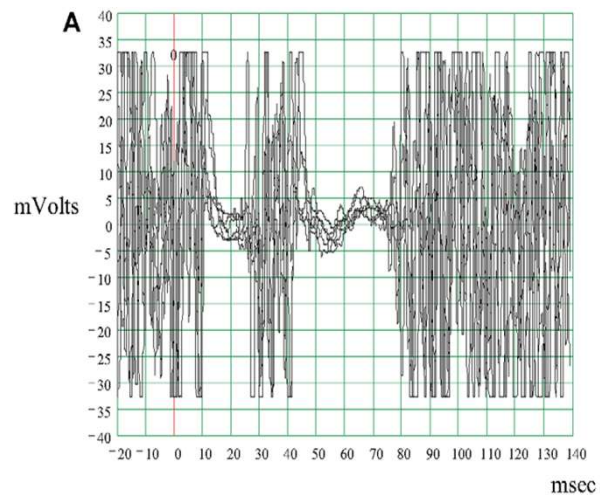
ELSEVIER

ORIGINAL ARTICLE

Automatic evaluation of the exteroceptive suppression of the temporalis muscle activity

Évaluation automatique de la suppression extéroceptive de l'activité du muscle temporal

R. Marashi ^{a,*}, H. Reyhler ^a, J.M. Guérit ^b



**STUDIO DELLA VARIABILITA' DEL
PERIODO SILENTE MASSETERINO
DOPO ELETTROAGOPUNTURA DEI 4
CANCELLI
(LI4 -LR3) NELL'EMICRANIA CRONICA:
RISULTATI PRELIMINARI**



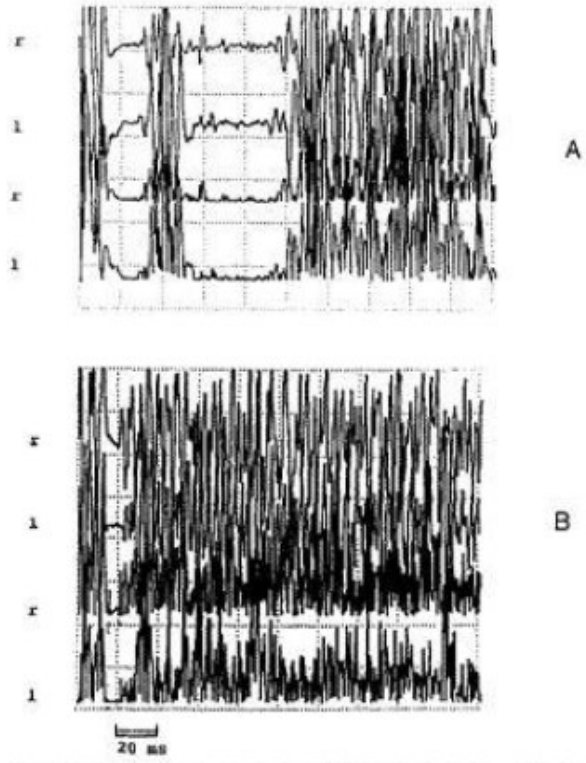


Fig. 1. Exteroceptive suppression of temporalis muscle activity: Surface EMG-recording of temporalis silent periods elicited by a single shock in a healthy volunteer (A) and a chronic tension-type headache sufferer (B). Ipsi- and contralateral reflex responses are shown above; the same EMG signals are given below as rectified curves.



OSSERVAZIONI PRELIMINARI

1. In condizioni basali durata del periodo ES2 minore negli emicranici rispetto alla popolazione di controllo (ns)
 - a) Normofunzione nei controlli
 - b) alterazione del sistema antinocicettivo negli emicranici cronici: emicrania + abuso

2. Aumento in durata dell'ES2 dopo EAP sia nella popolazione di controllo (ns) sia negli emicranici ($P < 0.001$)
 - a) EAP ininfluyente in situazione di equilibrio (controlli)
 - b) EAP efficace in situazione di squilibrio (emicranici)

VERUM VS SHAM

The durable effect of acupuncture for episodic migraine: a systematic review and meta-analysis

Hangyu Shi^{1,2†}, Runyu Miao^{2,3†}, Shuai Gao¹, Lili Zhu¹, Jiufei Fang¹
and Zhishun Liu^{1*}

- **DIFFERENTI TIPI DI SHAM-ACUPUNCTURE**
 - Non penetrazione
 - Penetrazione poco profonda
 - Punti fuori schema o meridiano (no deqi)
- **OGNI PROCEDURA CHE COMPORTA LA PENETRAZIONE DELLA CUTE NON PUO'ESSERE CONSIDERATA UN PLACEBO INERTE**

Acupuncture for acute migraine attacks in adults: a systematic review and meta-analysis

Yunlu Wang ¹, Ruosang Du,² Hai Cui,² Lu Zhang,²
Hongwen Yuan,² Shumei Zheng²

BMJ Evidence-Based Medicine August 2023 | volume 28 | number 4 |

- 21 RCT with 1926 patients
- Acupuncture vs
 - sham
 - placebo
 - no treatment
 - pharmacological therapy
 - plus pharmacological therapy
- Headache freedom and improvement of intensity at 2hours

WHAT THIS STUDY ADDS

⇒ Acupuncture may be more effective than sham acupuncture in relieving headache during an acute migraine attack, and at least as effective as pharmacological therapy. Acupuncture plus pharmacological therapy may be more effective than pharmacological therapy alone.

Conclusion The body of evidence suggests that acupuncture may be more effective than sham acupuncture in the treatment of migraine. Acupuncture may also be as effective as pharmacological therapy. However, the certainty evidence across outcomes was low to very low and new high-quality studies can provide more clarity.

PROSPERO registration number CRD42014013352.

Manual acupuncture versus sham acupuncture and usual care for prophylaxis of episodic migraine without aura: multicentre, randomised clinical trial

BMJ 2020;368:m697 doi: 10.1136/bmj.m697 (Published 26 March 2020)

Multicenter, randomised, controlled clinical trial with blinded participants

3 groups:

1. 20 sessions of manual acupuncture at true AP points plus usual care
2. 20 sessions of non penetrating sham AP at non heterosegmental non-acupuncture points plus usual care
3. Usual care alone over 8 weeks

Manual AP was superior to sham AP

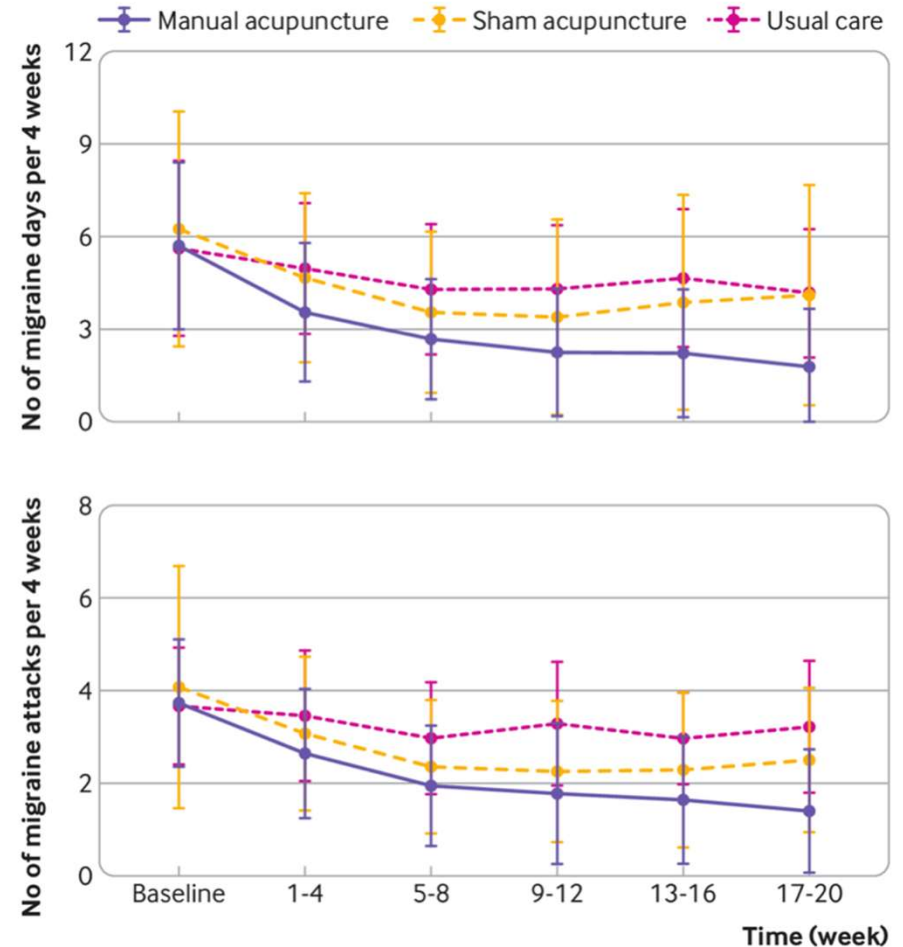


Fig 2 Primary outcomes throughout trial. Top: number of migraine days per 4 weeks through study period. Bottom: frequency of migraine attacks per 4 weeks through study period

POSSIBILITA'

POSSIBILITA'

- 1. NEUROMODULAZIONE**
- 2. NON SOLO EMICRANIA**
- 3. STIMOLAZIONE VAGALE AURICOLARE**

Acupuncture therapies for postherpetic neuralgia: a protocol for a systematic review and Bayesian network meta-analysis

Bian Z, *et al. BMJ Open* 2022;**12**:e056632.

The effects of acupuncture on occipital neuralgia: a systematic review and meta-analysis

Jung-Min Yun¹, Sook-Hyun Lee², Jae-Heung Cho³, Koh-Woon Kim³ and In-Hyuk Ha^{2*} 

Yun *et al. BMC Complementary Medicine and Therapies* (2020) 20:171

Acupuncture in cluster headache: four cases and review of the literature

L. Fofi · G. Allais · P. E. Quirico · S. Rolando ·
P. Borgogno · P. Barbanti · C. Benedetto

Neurol Sci (2014) 35 (Suppl 1):S195–S198

Acupuncture for the treatment of trigeminal neuralgia: A systematic review and meta-analysis

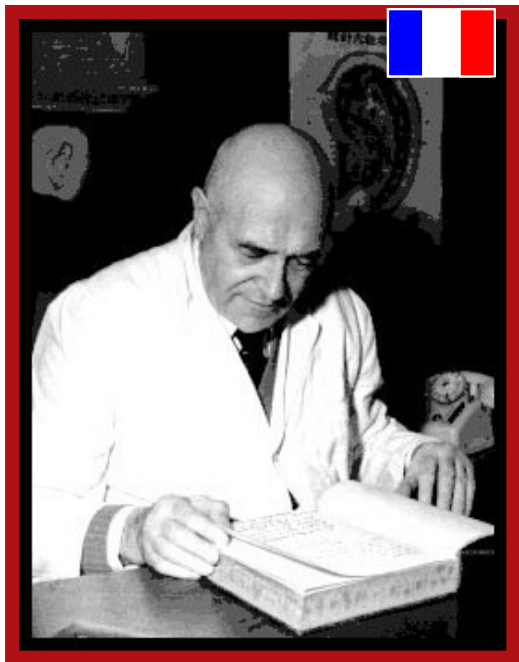
L. Ang *et al.*

Complementary Therapies in Clinical Practice 52 (2023) 101763

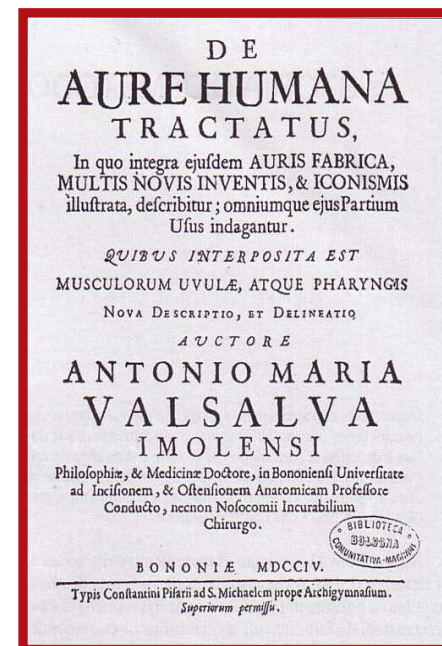
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ANNI '50



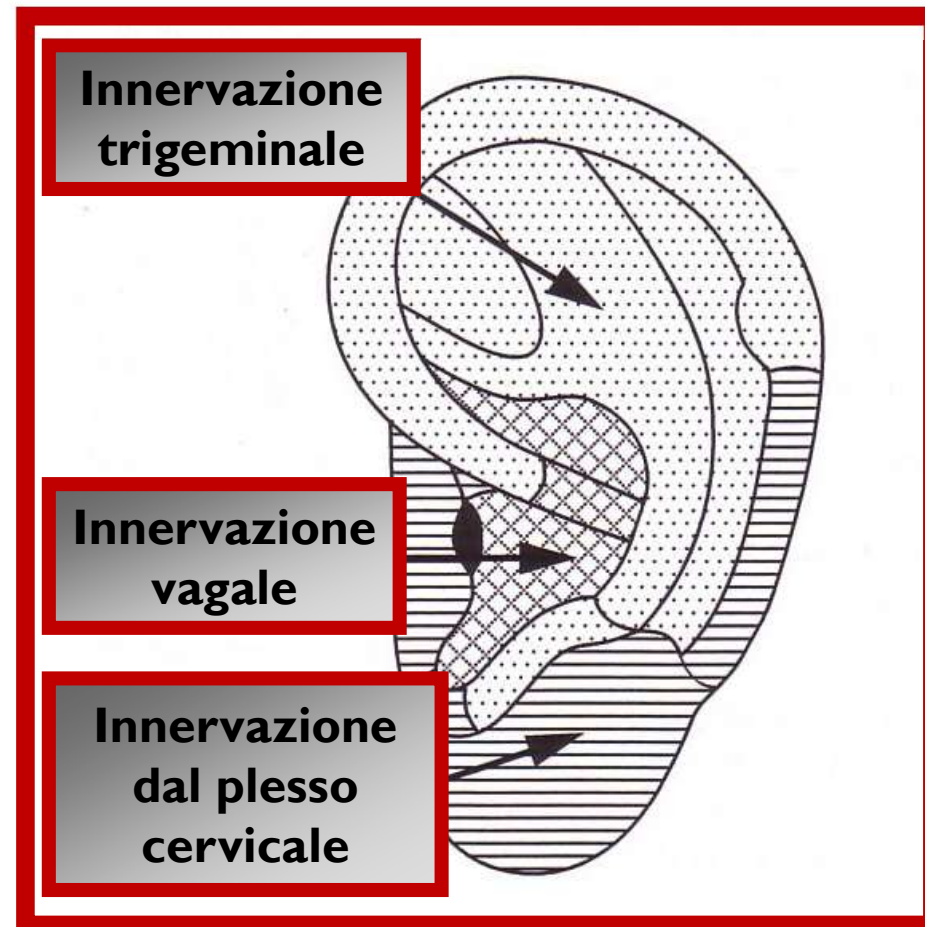
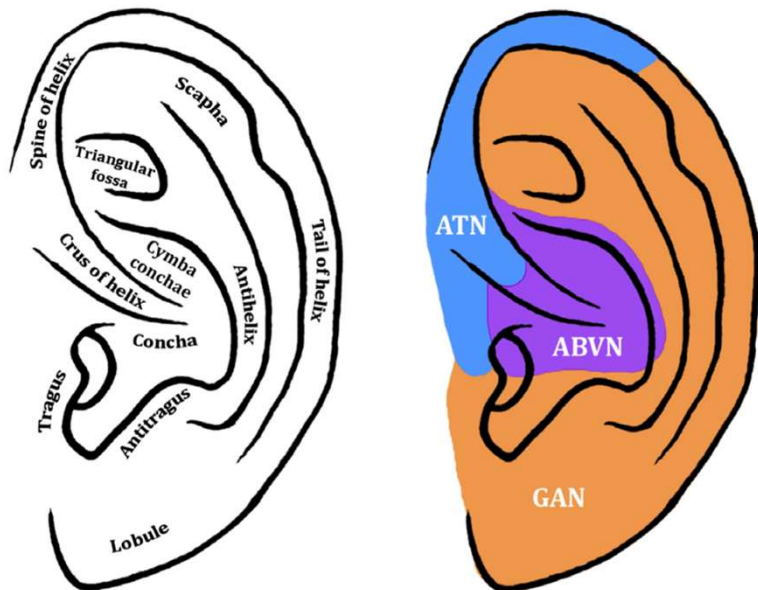
Dr. Paul Nogier 1908 -1996



The anatomical basis for transcutaneous auricular vagus nerve stimulation

Mohsin F. Butt¹,  Ahmed Albusoda,¹ Adam D. Farmer^{2,3} and Qasim Aziz¹

J. Anat. (2020) 236, pp588–611

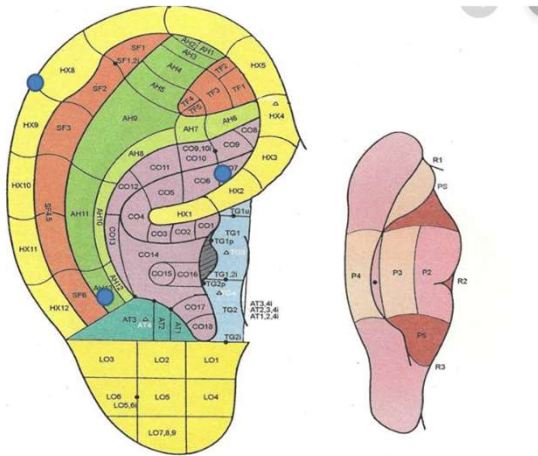


Auricular Therapy for Migraine

Karen A. Williams¹

- MEDLINE and Clinical Trials from 2013 to 2024(oct)
- 769 articles
- While each of the studies used a different metrics to measure the effect of the auricular therapy administration and used varying points, each of these therapies showed a benefit to management of migraine
- **This therapy may be a helpful adjunctive treatment option**

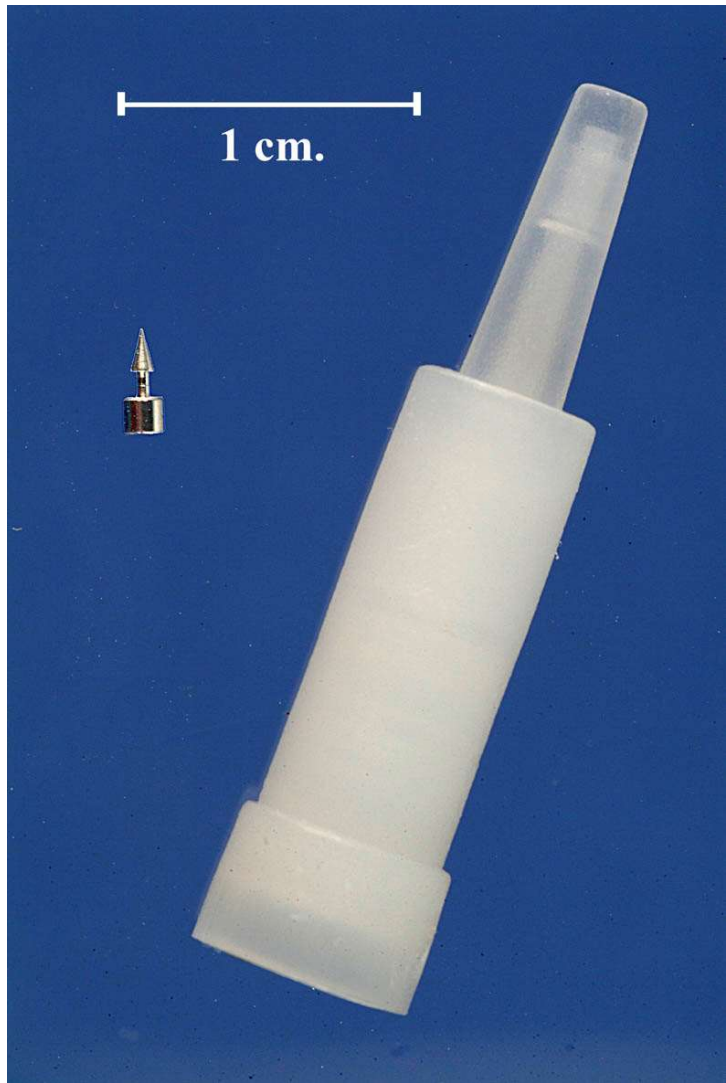
AURICOLOTERAPIA

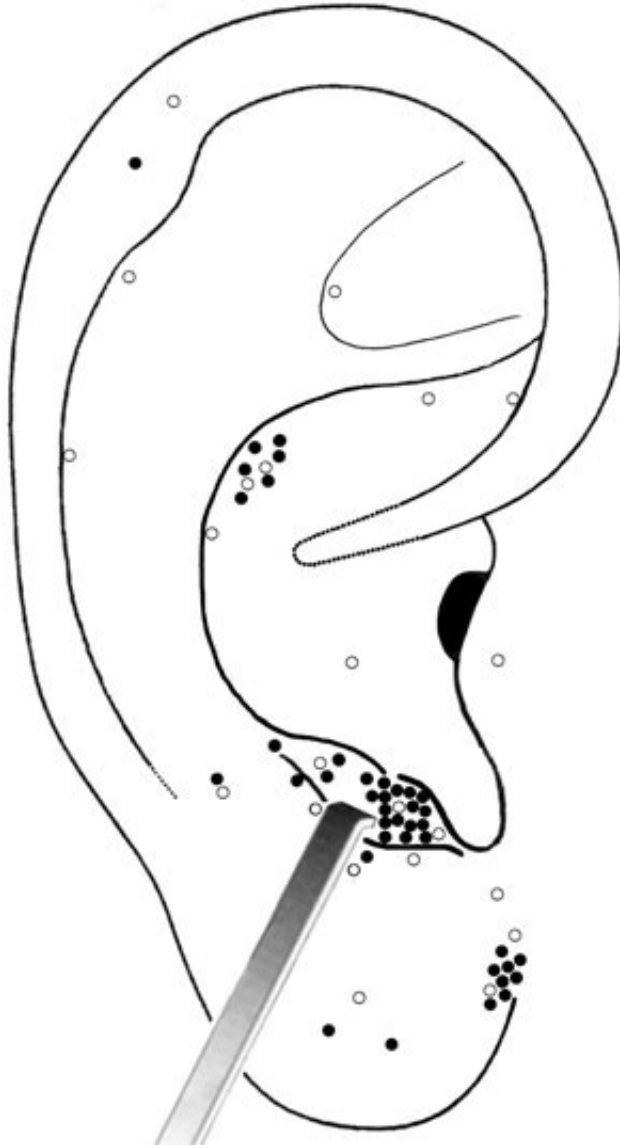


❖ TIPO CEROTTI: colore celeste (Seirin)

❖ TEMPISTICA: A fine trattamento di agopuntura







STIMOLAZIONE ELETTRICA AREA SHEN MEN E SUPERFICIE INTERNA DEL TRAGO



AZIONI TERAPEUTICHE DELLA STIMOLAZIONE VAGALE

- Azione antiepilettica
- Azione antidepressiva
- Azione antinfiammatoria e immunomodulatoria
- Azione protettiva nel danno cerebrale dopo un'ischemia.
- Azione sulla neuro-plasticità cerebrale.
- Azione sui fenomeni degenerativi del CNS
- Azione analgesica
- Azione ansiolitica
- Modulazione del tono simpatico / parasimpatico
- Azione sulla funzione cognitiva e sulla memoria
- Azione di incremento del wellness e anti-aging
- Modulazione della risposta di stress e miglioramento della performance

LIMITI

Therapeutic applications and potential mechanisms of acupuncture in migraine: A literature review and perspectives

Ying Chen[†], Yuhan Liu[†], Yine Song, Shaoru Zhao, Bin Li, Jingqing Sun and Lu Liu*

Department of Acupuncture and Moxibustion, Beijing Hospital of Traditional Chinese Medicine, Beijing Key Laboratory of Acupuncture Neuromodulation, Capital Medical University, Beijing, China

Limitations and perspective

Acupuncture prophylaxis for migraines is likely to be as effective as prophylactic medication. However, there are a few limitations in current clinical acupuncture literature. First, many studies used placebo acupuncture as a control. Although verum acupuncture is more effective than placebo, any skin-penetration intervention cannot be considered an inert placebo (Streng et al., 2006; Linde et al., 2009). Nevertheless, placebo acupuncture may induce a variety of unanticipated peripheral, segmental, and cerebral physiological reactions, which prevents double-blinded randomized clinical trials (RCTs) and introduces bias into clinical acupuncture studies (Yang et al., 2011). Second, there was substantial heterogeneity among the studies in terms of the acupuncture techniques used in the interventions, selection of outcome parameters, and controls. Studies with higher methodological quality in the control group and more uniform test parameters of acupuncture in treating migraine should be conducted in the future.

I LIMITI

- **Scarsa disponibilità di offerta in ambito del Sistema Sanitario Nazionale nonostante l'agopuntura sia inserita nei LEA**
- **Poche Regioni Italiane infatti forniscono la possibilità di erogare prestazioni di agopuntura nell'ambito dei loro SSR**
- **Assenza di un percorso universitario che porti alla qualifica specialistica di Agopuntore, nonostante i corsi triennali erogati dalle Scuole aderenti alla Federazione Italiana delle Società di Agopuntura siano riconosciuti come Master di I livello a validità nazionale.**

PIU' CHE LIMITI..... NODI DA RISOLVERE

- Eterogeneità degli studi
- La «visione globale del paziente in AP» come limite alla standardizzazione
- Il problema «sham»
- Markers di predittività
- L'offerta del SSN
- Il problema LEA e nomenclatore
- La formazione universitaria

