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The “Three treasures” in the geriatric animal
Rome, Italy 12-14 October 2023



**«MOXIBUSTIONE:
TRADIZIONE E SCIENZA»**

Francesc Minguell Martín, DVM
Barcelona (Catalunya)
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Agopuntura: Zhen jiu

MOXIBUSTIONE:

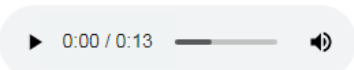
Calore terapeutico



COS'È LA MOXIBUSTIONE?

- La parola *Moe Kusa*, che tradotto significa "erba che brucia"
- Fa parte delle terapie della medicina veterinaria tradizionale cinese
- La terapia circondata da uno "scetticismo speciale"
- Più di 364 malattie possono essere curate con la Moxibustione





La acupuntura y la moxibustión de la medicina tradicional china



Nomination file n° 00425

- Expediente de candidatura: [inglés](#)/[francés](#)
- Consentimiento de las comunidades: [Chinese/English](#)

Decisión

Inscripción: [5.COM 6.6](#)

Informe periódico

Conceptos

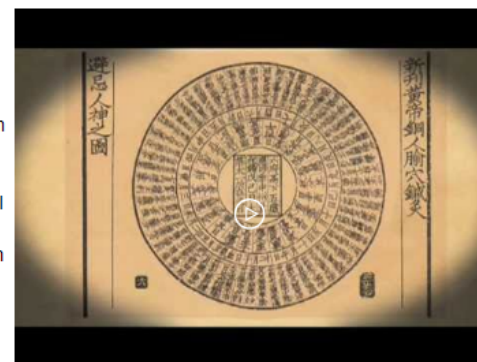
[Aguja \(7\)](#)

China

Inscrito en 2010 ([5.COM](#)) en la Lista Representativa del Patrimonio Cultural Inmaterial de la Humanidad



La acupuntura y la moxibustión son modalidades de la medicina tradicional de China que no sólo están ampliamente extendidas en este país, sino también en el Asia Sudoriental, Europa y América. Las teorías relativas a la acupuntura y la moxibustión sostienen que el cuerpo humano es un pequeño universo unido por canales que, mediante una estimulación física del acupuntor, pueden estimular las funciones de autorregulación del organismo y sanar a los pacientes. Esta estimulación se efectúa quemando abrótnano (moxa) o insertando agujas en determinados puntos de esos canales para restablecer el equilibrio del cuerpo y tratar y prevenir las enfermedades. En la acupuntura, las agujas se seleccionan en función de las condiciones del paciente y se usan para pinchar los puntos escogidos y estimularlos. La moxibustión suele comprender dos modalidades: una directa, en la que se aplican conos de abrótnano sobre los puntos seleccionados; y otra indirecta, en la que se mantiene un bastoncillo de abrótnano a una determinada distancia de la superficie del cuerpo para calentar la zona elegida. Los conos y bastoncillos se fabrican con hojas secas de abrótnano. El aprendizaje de la acupuntura y la moxibustión se efectuaban mediante instrucción verbal y demostraciones, y se transmitían de maestros a discípulos o entre los miembros de un clan. Actualmente, las técnicas de acupuntura y moxibustión se transmiten por medio de la enseñanza formal impartida en centros universitarios.



© Institute of Acupuncture and Moxibustion, 2009

PROPRIETÀ DELL'ARTEMISIA

Artemisa Vulgaris (Planta medicinale)

Nell'antichità, nelle Americhe, i vari popoli consideravano l'Artemisia una pianta sacra.

In Europa veniva posta sotto il cuscino per indurre i sogni (era considerata una pianta magica).

Tradizionalmente era conosciuta come la pianta delle donne.



moxibustion

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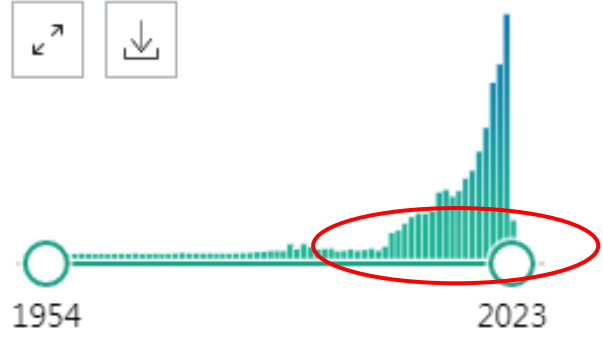
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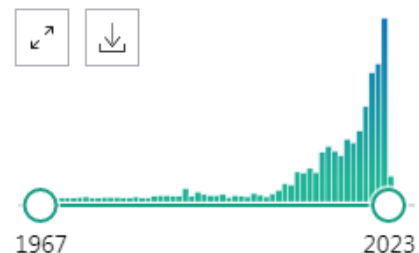
RESULTS BY YEAR



Moxibustion for Cephalic Version of Breech Presentation.

1 Schlaeger JM, Stoffel CL, Bussell JL, Cai HY, Takayama M, Yajima H, Takakura N.
Cite J Midwifery Womens Health. 2018 May;63(3):309-322. doi: 10.1111/jmwh.12752. Epub 2018 May 18.
PMID: 29775226 Review.

Share **Moxibustion**, a form of traditional Chinese medicine (TCM), is the burning of the herb moxa (Folium Artemisiae argyi or mugwort) over acupuncture points. ...Studies have demonstrated that **moxibustion** may promote cephalic version of breech presentation and may facilit ...



Moxibustion for pain relief in patients with primary dysmenorrhoea: a randomized controlled trial.

1 Yang M, Chen X, Bo L, Lao L, Chen J, Yu S, Yu Z, Tang H, Yi L, Wu X, Yang J, Liang F.

Share Cite PLoS One. 2017 Feb 7;12(2):e0170952. doi: 10.1371/journal.pone.0170952. eCollection PMID: 28170396 Free PM

Secondary outcome analyses pain-related symptoms. ...No moxibustion and convention

The American Journal of Chinese Medicine, Vol. 38, No. 5, 829–838
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 Institute for Advanced Research in Asian Science and Medicine
 DOI: 10.1142/S0192415X10008275

Moxibustion for Treating Pain: A Systematic Review

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 Peninsula Medical School
 Universities of Exeter & Plymouth
 Exeter, UK

Systematic Review and Meta-Analysis

Medicine®

OPEN

Effects of moxibustion on pain behaviors in patients with rheumatoid arthritis

A meta-analysis

Biyu Shen, MD^{a,b,c}, Qian Sun, MM^a, Haoyang Chen, MM^d, Yongchang Li, MM^a, Xian Du, MM^d, Hailing Li, MD^{b,*}, Guang-yin Xu, MD^{a,*}

Abstract

Background: Pain is the main symptom of patients with rheumatoid arthritis (RA). Reports of the effects of moxibustion on patients with rheumatoid arthritis have reached various conclusions. The aim of this meta-analysis was to evaluate the effect of moxibustion on pain in patients with RA.

Methods: A systematic search of MEDLINE, EMBASE, the Cochrane Library, and the Chinese databases Wan Fang Med Database, CNKI, and VIP (until November, 2018) was used to identify studies reporting pain (on a visual analogue scale (VAS)), erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) and rheumatoid factor (RF) levels, response rate, and the ACR50 rate in patients with RA. Results were expressed as mean difference (MD) and 95% confidence intervals (CI).

Results: Six studies involving 281 participants were included. Moxibustion had significant effects on pain (VAS: MD = -0.53, 95% CI [-0.94, -0.12], P = 0.01). Moreover, moxibustion had effects on CRP (MD = -2.84, 95% CI [-5.13, -0.55], P = 0.01), ESR (MD = -8.44, 95% CI [-13.19, -3.68], P = 0.0005), and RF (MD = -6.39, 95% CI [-18.57, 5.79], P = 0.30). Additionally, it had effects on response rate (n = 249, RR = 1.26, 95% CI [1.11, 1.43], P = 0.0004) and ACR50 rate (n = 140, RR = 1.44, 95% CI [1.11, 1.88], P = 0.007).

Conclusion: We found that moxibustion with Western medicine therapy is superior to Western medicine therapy alone for pain in patients with RA. Moxibustion had significant effects on pain in patients with RA, but the effects of moxibustion on inflammatory factors in RA were unclear.

Abbreviations: CI = confidence interval, CRP = C-reactive protein, ESR = erythrocyte sedimentation rate, MD = mean difference, RA = rheumatoid arthritis, RCT = randomized controlled trial, RF = rheumatoid factor, RRs = risk ratios, TCM = traditional Chinese medicine, VAS = visual analog scale.

Keywords: meta-analysis, moxibustion, pain, rheumatoid arthritis

Maturitas 100 (2017) 33–48

Contents lists available at ScienceDirect

Maturitas
 journal homepage: www.elsevier.com/locate/maturitas

Review

Moxibustion for the treatment of osteoarthritis: An updated systematic review and meta-analysis

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ABSTRACT

The aim of this study was to update previous reviews and examine recent evidence from randomised clinical trials (RCTs) of the use of moxibustion for osteoarthritis (OA). Twelve databases were searched from inception through to September 2016 with no language limits applied. Data extraction and risk-of-bias assessments were performed by two independent reviewers. A total of 19 RCTs met all inclusion criteria and were evaluated. Three RCTs compared the effects of moxibustion with those of sham moxibustion in patients with knee OA (KOA) and found favourable effects of moxibustion on pain reduction (n = 305; SMD, -0.46; 95% CI: -0.86 to -0.06, P = 0.02, I² = 65%), including at follow-up (n = 305; SMD, -0.36; 95% CI: -0.70 to -0.01, P = 0.04, I² = 54%). Eleven RCTs compared the effects of moxibustion with those of conventional oral drug therapies. Eight RCTs reported a total symptom score and the meta-analysis showed superior effects of moxibustion compared with drug therapies for this measure (n = 691; SMD, -0.24; 95% CI: -0.78 to 0.29; P = 0.37, I² = 91%) and response rate (n = 758 knees; RR, 1.10; 95% CI: 1.05–1.16, P < 0.0001, I² = 0%). Three RCTs found superior or equivalent effects of moxibustion on symptom score compared with intra-articular injection or topical drug therapy. The existing trial evidence is sufficiently convincing to suggest that moxibustion, compared with sham moxibustion and oral drugs, is effective for pain reduction and symptom management in KOA. The level of evidence is moderate, given the high risk of bias and small sample size.

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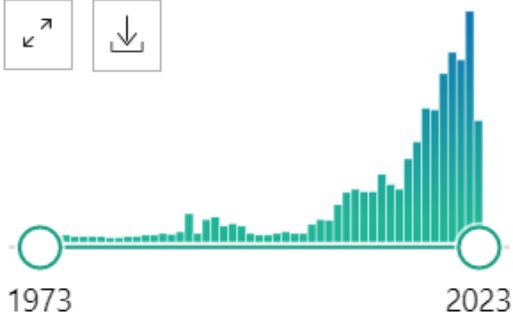
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RESULTS BY YEAR



Moxibustion regulates the polarization of macrophages through the IL-4/STAT6 pathway in rheumatoid arthritis.

1

Cite

Zhong YM, Zhang LL, Lu WT, Shang YN, Zhou HY.

Share

Cytokine. 2022 Apr;152:155835. doi: 10.1016/j.cyto.2022.155835. Epub 2022 Feb 28.

PMID: 35240467 Review.

RESULTS: It was observed that after the injection of FCA, the rats' feet showed obvious symptoms of redness and swelling. But the symptoms were significantly improved when **moxibustion** was employed.

Hindawi Publishing Corporation
Evidence-Based Complementary and Alternative Medicine
Volume 2013, Article ID 379291, 7 pages
<http://dx.doi.org/10.1155/2013/379291>

Review Article

The Mechanism of Moxibustion: Ancient Theory and Modern Research

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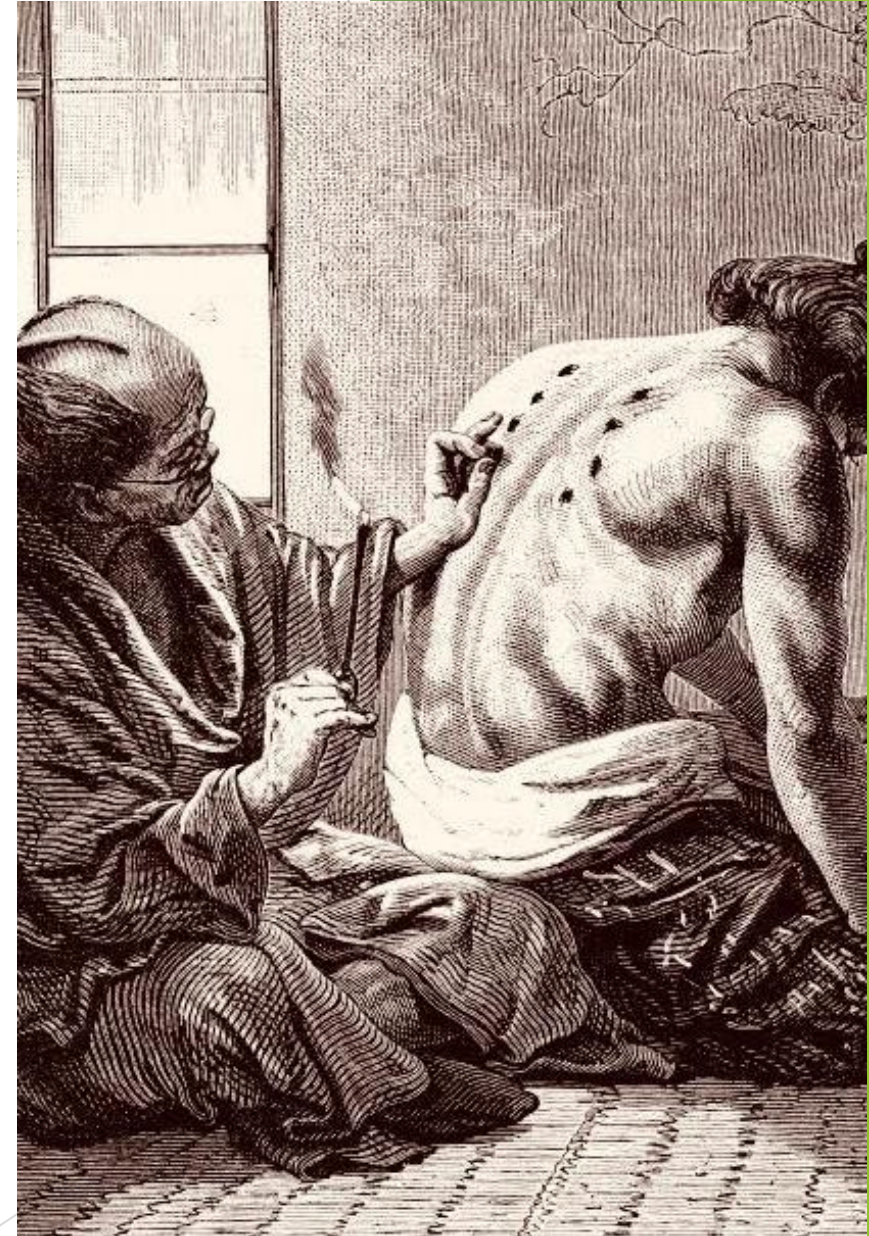
Teoria antica

- ▶ Teoria della moxibustione tradizionale: Il Ling Shu, Guan Neng dice che dove l'ago non funziona, la moxibustione sì.
- ▶ La medicina elementare ritiene che le malattie che non possono essere curate con farmaci e agopuntura dovrebbero essere trattate con la moxibustione.
- ▶ La teoria MTC sostiene che la moxibustione ha un duplice effetto di tonificazione e purgazione.
- ▶ La sua efficacia è incline al riscaldamento e al nutrimento. Quindi, la moxibustione viene spesso applicata nella sindrome da carenza-freddo, anche se alcuni sindrome da calore in eccesso possono anche usarlo.



Teoria antica

- ❖ I ruoli della moxibustione possono essere ampiamente raggruppati in:
 - ❖ Il nutrimento caldo si riferisce ai benefici del riscaldamento dello Yang, tonificando il qi, nutrendo il sangue e alleviando l'esaurimento.
 - ❖ Il dragaggio caldo si riferisce alle funzioni di attivazione del sangue, dissolvenza della stasi, promozione del qi, dragaggio dei canali e alleviamento del dolore
 - ❖ Lo scioglimento caldo si riferisce ai ruoli di ridurre la flemma, eliminare il ristagno, rimuovere il vento, dissipare l'umidità, estrarre il veleno e spurgare il calore.



Teoria antica

- ❖ Alcune persone credono che il dragaggio caldo sia la natura della moxibustione ed è il ruolo chiave degli effetti della moxibustione.
- ❖ Le funzioni della moxibustione, espellere il freddo, promuovere la circolazione nei meridiani e nei collaterali, eliminare il calore, disintossicarsi e così via, dipendono dall'efficacia della moxibustione per il qi circolante e il flusso sanguigno.
- ❖ Nella teoria di base della MTC, gli effetti della moxibustione si basano su due aspetti:
 - ❖ l'azione del sistema dei meridiani e
 - ❖ il ruolo della moxa e del fuoco.



Teoria Moderna

Moxibustione

aumenta la
temperatura
nei tessuti

produce vasodilatazione (aumenta
l'ossigeno e le sostanze nutritive)
Aumenta la circolazione

Oli essenziali

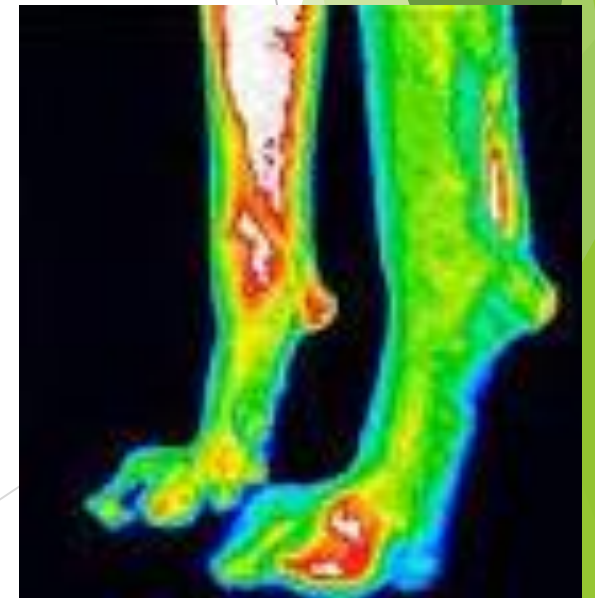
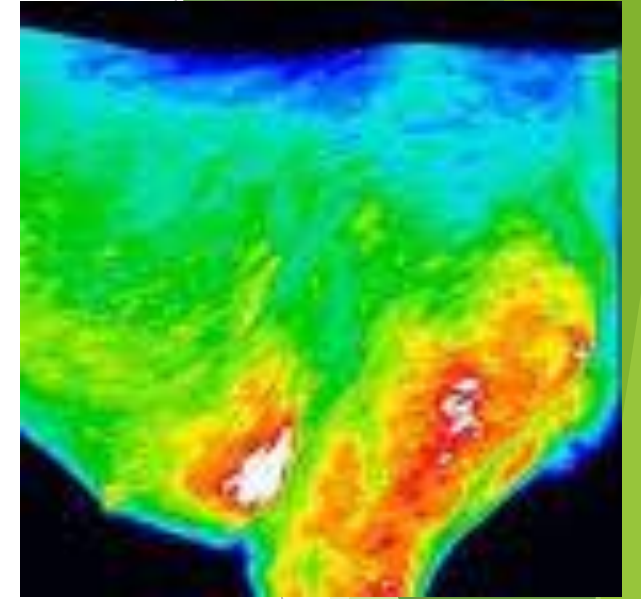
Effetto
infrarosso
(pelle)

Effetto termico:

L'esperimento di attivazione del neurone del sottonucleo reticularis dorsale (SRD) mediante intensità varietali di stimolazione termica della moxibustione ha dimostrato che la stimolazione termica nociva (44-52° C) può attivare i neuroni SRD, che raggiungono un plateau quando l'area stimolata viene aumentata a un certo intervallo.

L'effetto caldo-calore della moxibustione ha una stretta relazione con i recettori caldi (WR) e/o il recettore polimodale (PRs)

- ▶ Raggiunge i 130° all'esterno (53°, internamente)
- ▶ Moxa acceso: 548-890°C



COMPLICACIONES DE LA MOXIBUSTION



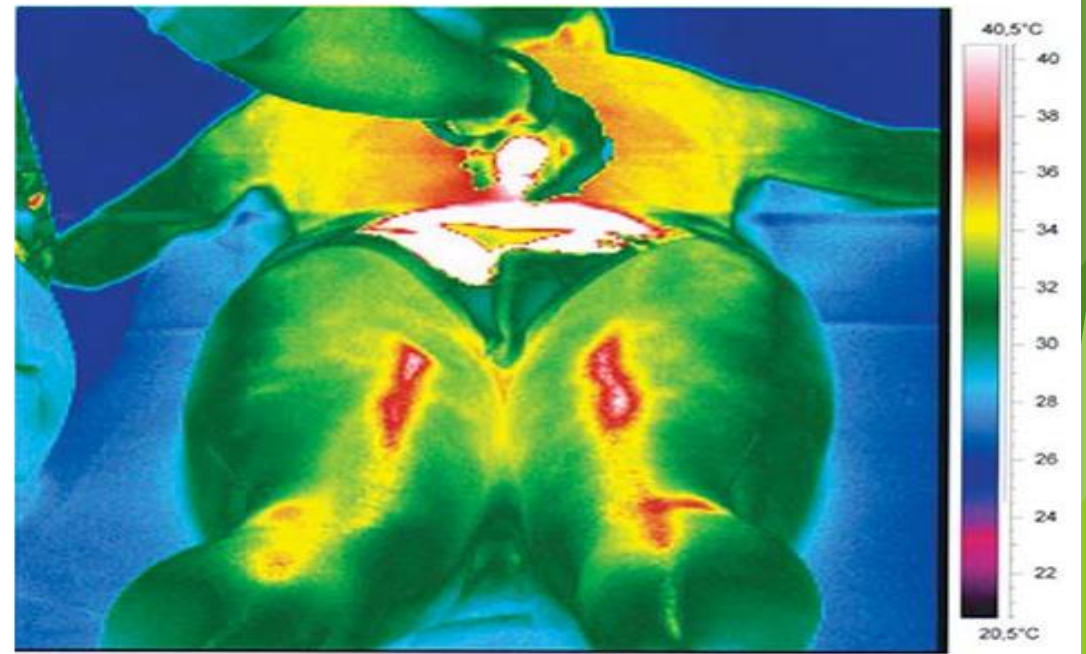
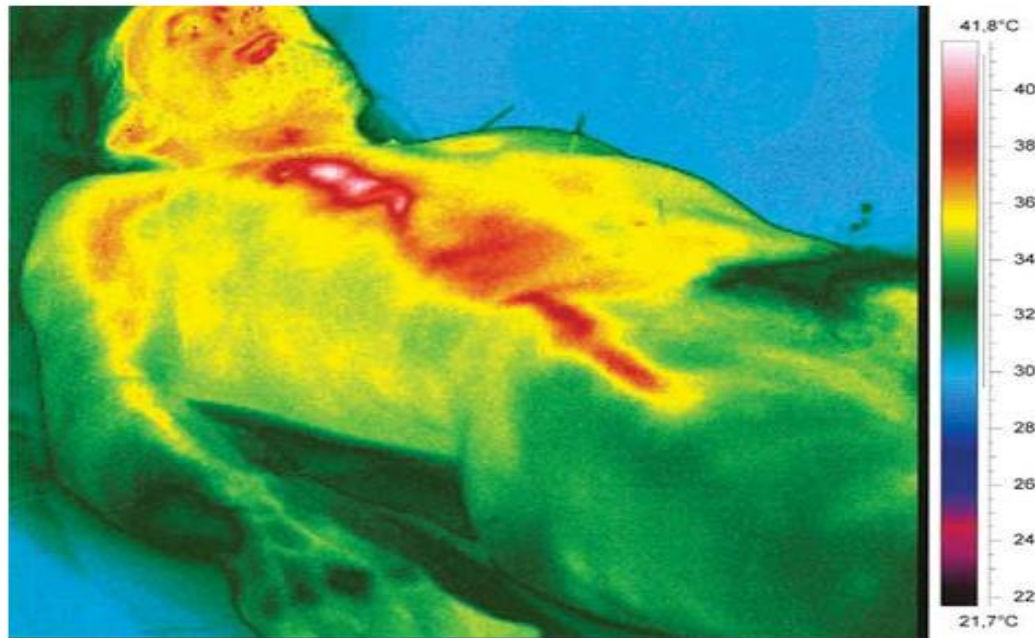
Quemadura de 1°-2 ° y 3°

COMPLICACIONES DE LA MOXIBUSTION

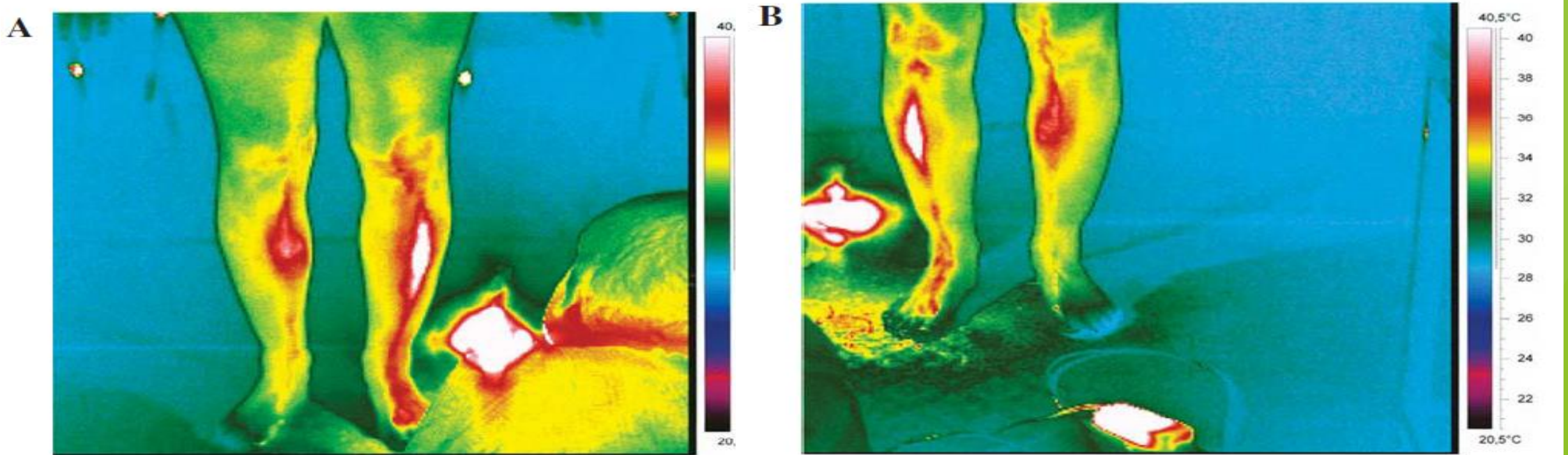


Biophotonics in the Infrared Spectral Range Reveal Acupuncture Meridian Structure of the Body

KLAUS-PETER SCHLEBUSCH, Ph.D., WALBURG MARIC-OEHLER, Ph.D.,
and FRITZ-ALBERT POPP, Ph.D.

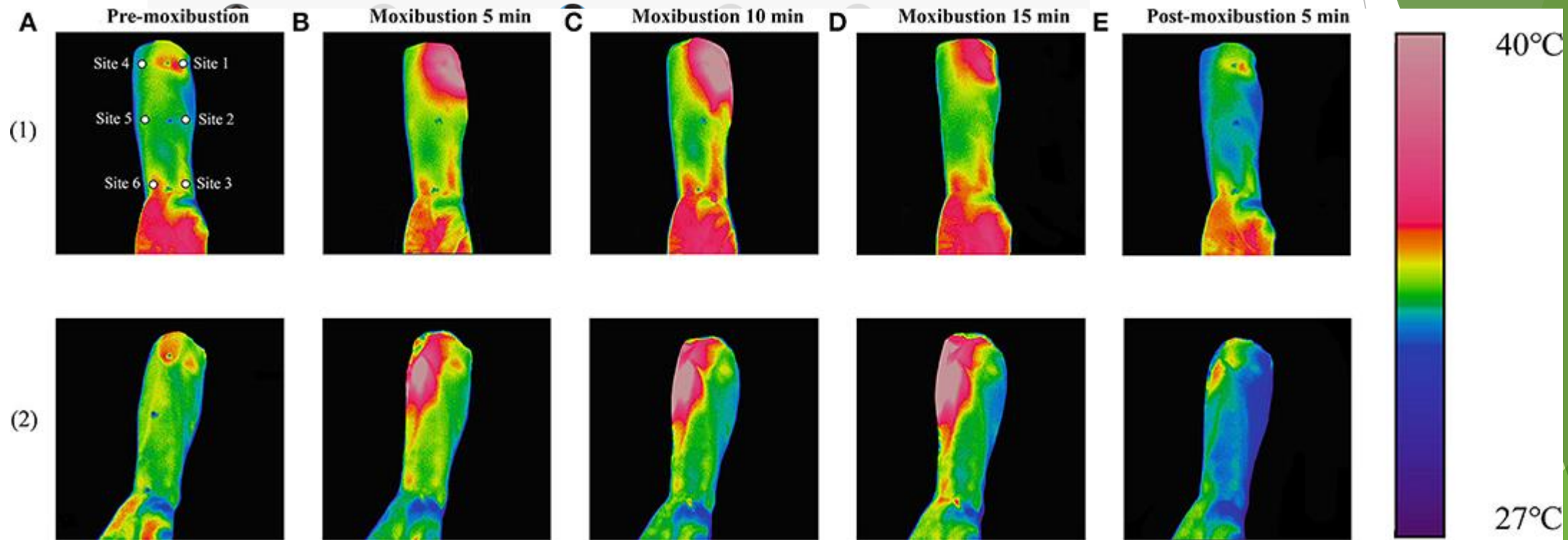


Biofotoni



*Biophotonics in the Infrared Spectral Range Reveal
Acupuncture Meridian Structure of the Body”*

The Moxibustion-Induced Thermal Transport Effect Between the Heart and Lung Meridians With Infrared Thermography



<https://www.frontiersin.org/articles/10.3389/fcvm.2022.817901/full>

Effetto radiazioni:

- ▶ La moxa in fiamme emette luce visibile e radiazioni infrarosse (IR).
- ▶ Attualmente, l'opinione comune è che lo spettro delle radiazioni della moxa accesa vada da 0,8 a 5,6 μm ; il picco è vicino a 1,5 μm , nella porzione del vicino infrarosso (NIR) o con un picco dello spettro a 2,8 μm attraverso il NIR fino all'infrarosso medio (MIR).
- ▶ L'energia generata dall'effetto fotoelettrico e dal processo fotochimico e passata attraverso il sistema nervoso-umorale può fornire l'attivazione delle cellule patologiche prive di energia e quindi regolare ulteriormente le funzioni immunitarie e neurologiche dell'organismo.

TABLE 1: Intensities and peaks wavelengths of the infrared radiation of traditional moxibustion, moxibustion with controls, and Hegu (LI4).

	<i>n</i>	Intensity of radiation (mV)	Wavelength of the peak of radiation (μm)
Traditional moxa stick	4	43300.41 \pm 425.15	3.5
Smokeless moxa stick	4	31.15 \pm 3.49 [†]	7
555 cigarette	4	37.03 \pm 3.82 [†]	3.5
Indirect moxibustion with monkshood cake	4	681.87 \pm 47.52 ^{**$\Delta\Delta$}	8
Indirect moxibustion with ginger	4	520.27 \pm 68.22 ^{*Δ}	7.5
Indirect moxibustion with garlic	4	594.79 \pm 44.71 ^{**$\Delta\Delta$}	7.5
Indirect moxibustion with cucumber	4	274.47 \pm 19.61	5
Indirect moxibustion with carrot	4	50.53 \pm 4.68	5
LI4 (Hegu)	28	20.40 \pm 5.69	7.5

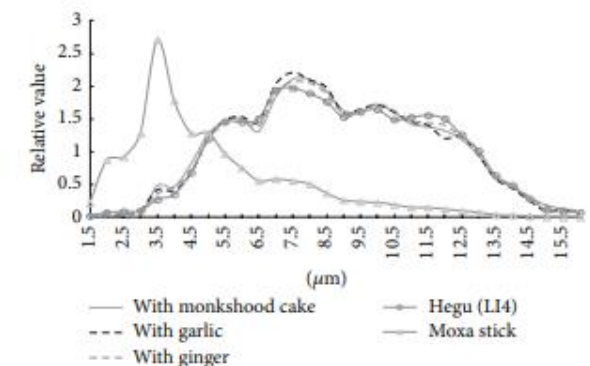


FIGURE 1: Unified infrared radiation spectrums of an acupuncture point, Hegu (LI 4), direct moxibustion with a traditional moxibustion stick, and indirect moxibustion with three traditional media.

Effetto farmacologico

- ▶ Sono stati identificati più di 60 tipi di componenti:
- ▶ Gli oli volatili della moxa includono
 - ▶ 1,8-cineolo,
 - ▶ alcheni (alfatujene, pinene, sabinene, ecc.),
 - ▶ canfora,
 - ▶ borneolo e piccole aldeidi,
 - ▶ chetoni, fenoli, alcani e composti della serie del benzene.
 - ▶ L'eptatriacontane (C₃₇H₇₆) svolge un ruolo importante nella combustione.
 - ▶ Ha anche tannini, flavonoidi, steroli, polisaccaridi, oligoelementi e altri ingredienti.

Effetto farmacologico



► Fumo:

Contiene una varietà di componenti complessi e i suoi ingredienti volatili sono


- ❖ ammoniaca,
- ❖ alcoli (glicole etilenico, pentil butanolo),
- ❖ idrocarburi alifatici,
- ❖ idrocarburi aromatici,
- ❖ composti terpenici e loro ossidi

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<https://doi.org/10.1155/2020/6108619>



Review Article

Effect of Moxibustion on Inflammatory Cytokines in Animals with Rheumatoid Arthritis: A Systematic Review and Meta-Analysis

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Effect of Moxibustion on Inflammatory Cytokines in Animals with Rheumatoid Arthritis: A Systematic Review and Meta-Analysis

- ▶ This meta-analysis indicated that moxibustion has certain effects on the amelioration of the inflammation in animal models with RA, including the downregulation of the level of **proinflammatory cytokines** and the upregulation of the level of **anti-inflammatory cytokines** at the same time.
- ▶ Clinical trials revealed that moxibustion can enhance the anti-inflammatory and analgesic effects of conventional medicine and downregulate HIF-1 α /VEGF contents to **inhibit angiogenesis**



Effect of Moxibustion on Inflammatory Cytokines in Animals with Rheumatoid Arthritis: A Systematic Review and Meta-Analysis

The Yellow Emperor's Internal Classic holds that the occurrence of RA is closely related to the invasion of three perverse trends of [wind, cold, and dampness](#).

The primary pathogenesis is the deficiency of healthy Qi in viscera and the meridian is blocked by accumulated dampness, which has close relationship with [spleen, stomach, and kidney](#).

Therefore, warming the meridian and removing dampness through invigorating spleen and kidney are the basic principles of treatment.

Almost all the selected acupoints belong to the [Stomach Meridian and Kidney Meridian](#). It is consistent with the basic pathogenesis of the [Qi deficiency and pathogenic stagnation](#), which plays a key role in ensuring effectiveness by warming the meridian and eliminating dampness through invigorating spleen and kidney, dredging channel of Qi and blood, and harmonizing Yin and Yang.



Effect of moxibustion on autophagy and the inflammatory response of synovial cells in rheumatoid arthritis model rats

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Research Article

Effect of moxibustion on autophagy and the inflammatory response of synovial cells in rheumatoid arthritis model rats

HAO Feng, WANG Qiang, LIU Lei, WU Libin, CAI Ronglin, SANG Jiajia, HU Jun, WANG Jie, YU Qing, HE Lu, SHEN Yingchao, MIAO Yiming, HU Ling, WU Zijian

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Available online: March 24, 2021

Abstract

OBJECTIVE: To investigate the effect of moxibustion on synovitis and the autophagy of synoviocytes in rheumatoid arthritis (RA).

METHODS: Forty Sprague-Dawley rats were randomly divided into a normal group, model group, moxibustion group, cigarette moxibustion group, and medicine group, with eight rats included in each group. The RA model was established by subcutaneous injection of complete Freund's adjuvant into the left posterior toe. Rats in the

model group were not interfered with. In the moxibustion group, rats were treated by moxibustion, where a 1-cm diameter moxa stick was applied at the left Zusanli (ST 36) point. The distance of the moxa stick to the skin was 2 cm and moxibustion was completed for 20 min daily for 15 d total. In the cigarette moxibustion group, the moxa stick was replaced by a common cigarette. In the medicine group, rats were treated with a tripterygium glycoside suspension (8 mg/kg) once a day for 15 d total. In each group, the left hind limb toe volume was measured with a toe volume meter; the synovial cells were observed by hematoxylin and eosin staining; the interleukin (IL)-4, IL-6, IL-10, IL-1 β , IL-23, IL-17, and tumor necrosis factor (TNF)- α levels in serum were measured by enzyme-linked immunosorbent assay; the erythrocyte sedimentation rate (ESR) were detected by Westergren sedimentation rate testing; the C-reactive protein (CRP) and rheumatoid factor (RF) levels in serum were detected by rate nephelometry; the expression levels of ULK1, autophagy-associated protein (Atg3, Atg5, and Atg12 messenger RNA (mRNA) in synovium were detected by real time-quantitative polymerase chain reaction (RT-qPCR); and the protein expression levels of phosphatidylinositol-3-kinase (PI3K), protein kinase B (Akt), mammalian target of rapamycin (mTOR), LC3-II, beclin-1, phosphorylated-PI3K (p-PI3K), p-Akt, p-mTOR in synovium were detected by Western blotting.

RESULTS: Among the RA model rats, joint swelling, an inflammatory reaction, and the proliferation of synovial tissue were obvious and the signal of the PI3K/Akt/mTOR pathway was active, while autophagy was inhibited. Moxibustion at Zusanli (ST36) or intragastric administration of Tripterygium wilfordii glycosides could alleviate the inflammatory reaction of RA rats; relieve the swelling of the toes; downregulate the levels of ESR, CRP, RF; lower the levels of IL-6, IL-1 β , TNF- α , and IL-17; and increase the IL-4 and IL-10. At the same time, the mRNA expression levels of ULK1, Atg3, Atg5, and Atg12 and those of LC3-II and beclin-1 were increased, while the PI3K, Akt, mTOR, p-PI3K, p-Akt, p-mTOR were decreased. Cigarette moxibustion did not significantly reduce the swelling of the toe joint in RA rats, and was not as good as that of moxibustion or Tripterygium

Research Article

Effect of moxibustion on autophagy and the inflammatory response of synovial cells in rheumatoid arthritis model rats

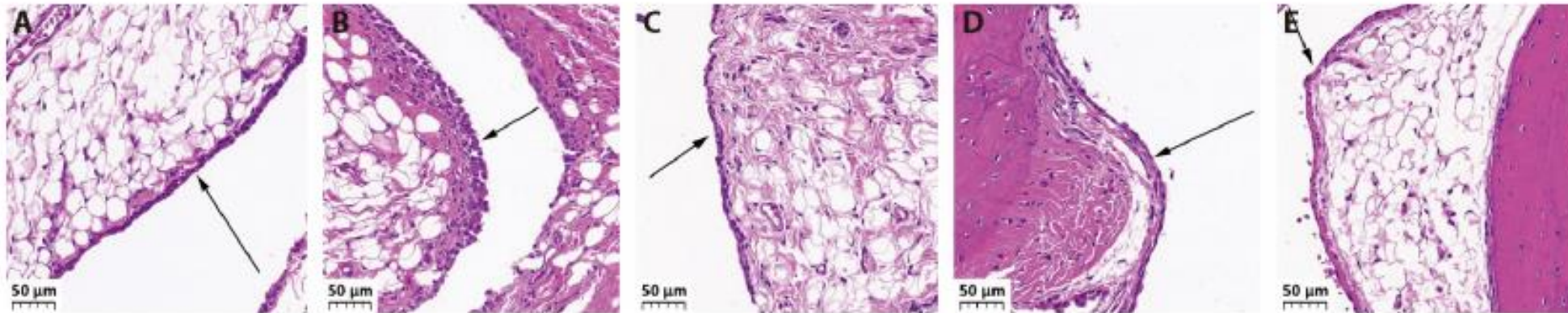


Figure 1 Hematoxylin and eosin staining of the morphology of the synovium of the left hind limb joints of rats
A: normal group; B: model group; C: moxibustion group; D: cigarette moxibustion group; E: medicine group. Normal group were not established of any model or treated with any intervention. Model group were established of rheumatoid arthritis model and treated without any intervention. Moxibustion group were established of rheumatoid arthritis model and treated with moxibustion for 15 d. Cigarette moxibustion group were established of rheumatoid arthritis model and treated with cigarette moxibustion for 15 d. Medicine group were established of rheumatoid arthritis model and treated with tripterygium glycoside (8 mg/kg per day) for 15 d. Black arrow heads synovium. Scale bar = 50 μ m.

CONCLUSION: Moxibustion can limit the proliferation of synoviocytes in RA rats by inhibiting the PI3K/Akt/mTOR signaling pathway, promoting autophagy, effectively reducing synovitis, and alleviating joint swelling.

Research Article

Efficacy of Moxa-burning heat stimulating Zusanli (ST36) and Shenshu (BL23) on expressions of macrophage migration inhibitory factor and macrophage apoptosis in rabbits with adjuvant-induced arthritis

ZHOU Haiyan, ZHONG Yumei, GAO Xiuhua, WU Fei, JIA Min, YANG Xin

Research Article

Efficacy of Moxa-burning heat stimulating Zusanli (ST36) and Shenshu (BL23) on expressions of macrophage migration inhibitory factor and macrophage apoptosis in rabbits with adjuvant-induced arthritis

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Abstract

OBJECTIVE: To evaluate the effects of moxa-burning heat stimulating acupoints Zusanli (ST36) and Shenshu (BL23) on macrophage migration inhibitory factor (MIF)

and its related molecules which can provide scientific experimental basis for the clinical application of moxibustion treatment of rheumatoid arthritis (RA).

METHODS: Thirty rabbits were randomly assigned to control group, RA model (established by injecting Freund's Complete Adjuvant) group (RA group) and RA model with moxibustion group [Moxa group, Zusanli (ST36) and Shenshu (BL23), 5 moxa pillars/day, 6 d × 3]. The expressions of MIF mRNA were evaluated with reverse transcription polymerase chain reaction; the apoptosis rates of macrophages were detected by terminal deoxynucleotidyl transferase-mediated dTUP nick end labeling; the expressions of related signal molecules were detected with immunohistochemical S-P method and the levels of IL-2 were detected with enzyme-linked immunosorbent assay.

RESULTS: The expressions of MIF mRNA, extracellular regulated protein kinases 2, p38 mitogen-activated protein kinase and nuclear factor- κ -gene binding p65 in synovial tissue of RA group were significantly increased when compared with control group, which were lower remarkably in moxa group than those in RA group. The apoptosis rates of macrophages in RA group were significantly down-regulated as compared with the control group, which were up-regulated in moxa group compared with the RA group. The levels of IL-2 in synovial fluid from the RA group were elevated significantly as compared with that from control group, but those of the moxa group were reduced when compared with those from RA group.

CONCLUSIONS: Moxibustion may simultaneously regulate the expressions of MIF and its related signaling pathways molecules, the apoptosis rate of macrophages in synovial tissue, as well as the level of inflammatory factors in synovial fluid. The results suggest that the anti-inflammatory effect of moxibustion on RA may be related to inhibit the expression of MIF in synovial tissue, the molecules of some related signaling pathways and promote the apoptosis of macrophage.

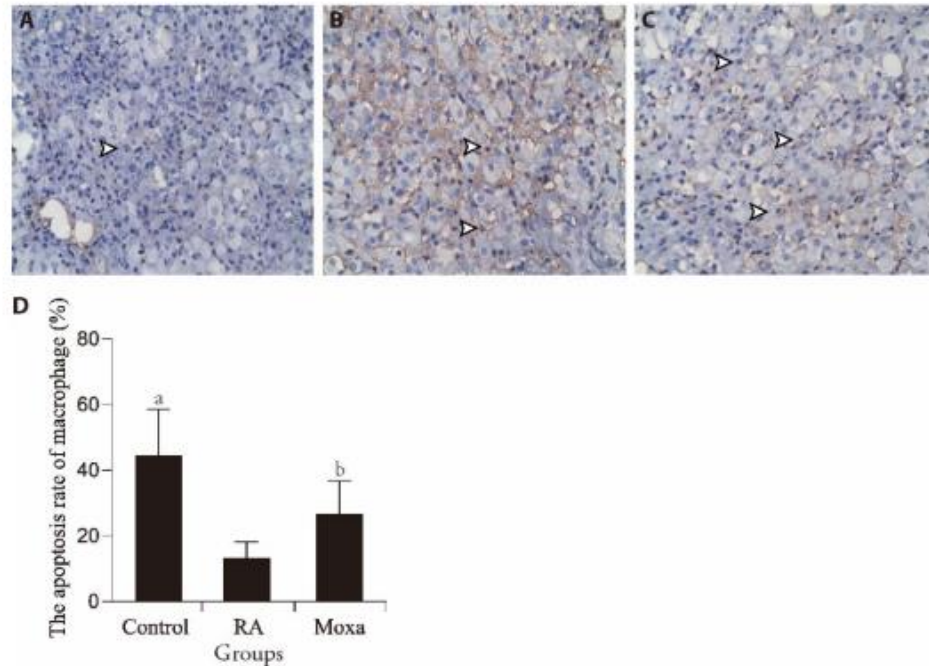


Figure 1 Apoptosis rate of macrophages in control, RA and Moxibustion group

A-C: terminal deoxynucleotide transferase-mediated dUTP nick end labeling staining ($\times 400$). A to C representative images show the apoptosis of macrophages in control (A), RA (B) and moxibustion (C) group. Black arrow indicates the apoptosis of macrophages. D showed the statistical analysis of the apoptosis of macrophages. $n = 10$ for each group. RA group and Moxa group were established by injecting FCA (0.5 mL/kg) into the bilateral posterior knee joints. Control group was injected with the same volume sterile normal saline in the same way. Moxa group was treated by moxa-burning heat on Zusanli (ST36) and Shenshu (BL23) once 1 d for 3 courses after FCA injection. Other two groups were fixed with the same method for the same time without moxibustion. Data were expressed as the mean \pm standard deviation. Compared with the Control group, $^aP < 0.01$; compared with the RA group, $^bP < 0.05$. RA: rheumatoid arthritis; FCA: Freund's complete adjuvant.

RESULTS: Effect of moxibustion on

1. macrophage migration inhibitory factor mRNA expression in RA synovium tissue
2. Apoptosis rate of macrophages in RA synovium tissue
3. the levels of IL-2 in RA synovium fluid
4. the expression of ERK2 in RA synovium tissue
5. the expression of p38MAPK in RA synovium tissue
6. the expression of NF κ Bp65 in RA synovium tissue
7. the Pathological changes of joint



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Acupuncture and Moxibustion for Antiaging

[Huangan Wu](#) 

Chapter | [First Online: 01 January 2012](#)

Chapter 10 Acupuncture and Moxibustion for Antiaging

Huangan Wu

Abstract Mechanisms under aging and its related diseases have increasingly been a research focus for the potential of leading to novel approaches to antiaging, which is of great significance of human health. In recent years, much attention has been given to complementary and alternative therapies, among which are traditional Chinese medicine (TCM) treatments such as acupuncture and moxibustion. While substantial research evidence is available supporting their antiaging effects, acupuncture and moxibustion are characterized by easy administration and cost-effectiveness. According to biomedical theories, moxibustion and acupuncture are supposed to influence aging processes through various mechanisms, such as elimination of free radical damage and regulation of immunity, neuroendocrine, lipid metabolism, rheological characteristics of blood flow, trace elements, telomerase, and carbonyl poisoning. These findings reveal the potential value of acupuncture and moxibustion for antiaging in experimental research as well as practical application.

- ▶ Recent research shows that acupuncture and moxibustion can have not only positive effects on objective indicators of aging but also holistic regulatory effects on the entire body.
- ▶ In terms of acupoint selection, acupuncture and moxibustion for antiaging should be focused on

- ▶ Zusanli (ST-36)
- ▶ Guanyuan (RN-4)
- ▶ Qihai (RN-6)
- ▶ Dazhui (DU-14)
- ▶ Shenque (RN-8)
- ▶ Zhongwan (RN-12)
- ▶ Shuigou (DU-26)
- ▶ Neiguan (PC-6)
- ▶ Yongquan (KI-1)



Moxibustion therapy on lumbar disc herniation An evidence-based clinical practice guideline

Fanghui Hua, MM^a, Jun Xiong, PhD^{b,*}, Haifeng Zhang, PhD^{b,*}, Jie Xiang, MM^a, Shouqiang Huang, MM^a

Abstract

Background: Lumbar disc herniation (LDH), as a disease with great disturbance to life and work, is known as the origin of the severe and disabling forms of nerve root pain. Recognized as an increasingly widely accepted treatment, the efficacy of moxibustion on LDH has been affirmed. However, clinical practice guidelines (CPG) for the treatment of LDH with moxibustion have not been developed. Therefore, we will carry out this work following the accepted methodological quality standards.

Methods: The new CPG will be developed according to the Institute of Medicine (IOM), the Appraisal of Guidelines for Research & Evaluation II (AGREE II) and WHO guideline handbook. And then determine recommendations based on high-level evidence. We will set up a Guideline Working Group and define clinical issues according to the PICO principles (Population, Intervention, Comparison, Outcomes). After evidence syntheses and several rounds of Delphi process, we will reach the consensus. In making the guideline, Patient values or preferences, results of peer review, and interest statements are all within the bounds of what we must consider.

Results: As the study is not yet complete, no results can be reported.

Conclusion: So far, we will develop the first CPG for moxibustion of LDH strictly based on systematic methodologies in China. This CPG will establish the standard of LDH in moxibustion therapy.

Registration number: IPGRP-2020CN034.

Abbreviations: AGREE II = Appraisal of Guidelines for Research & Evaluation II, CPG = Clinical practice guideline, GRADE: Grade of Recommendations Assessment, Development and Evaluation, IOM = Institute of Medicine, LDH = Lumbar disc herniation, PICO = Population, Intervention, Comparison, Outcomes, RIGHT = Reporting Items for practice Guideline in Healthcare, WHO = World Health Organization.

Keywords: guideline, lumbar disc herniation, moxibustion

Hua et al. Medicine (2021)

Thunder-fire moxibustion for lumbar disc herniation A systematic review and meta-analysis

Jianye Chen, Master^a, Zongxiu Luo, Master^a, Mingda Liu, Master^a, Fusheng Wang, Master^a, Rui Zhou, Master^a, Ying Wang, Doctor^b, Yuyan Jia, Doctor^b, Xukai Wang, Doctor^{b,*}, Xiangyang Leng, Doctor^{a,*}

Abstract

Background: Lumbar disc herniation (LDH) is a common degenerative disease that severely impacts the quality of life of patients. Thunder-fire moxibustion is an ancient Chinese medicine-based external therapeutic procedure that has been employed for pain relief until this day. The focus of our study was to demonstrate the effectiveness and safety of thunder-fire moxibustion in the treatment of LDH.

Methods: The literature databases searched included the Cochrane Library, Web of Science, Springer, PubMed, Wanfang digital periodicals database, China national knowledge infrastructure, VIP, and Chinese biomedical literature database, and the search period was from database creation to March 2022. These include randomized controlled trials of Thunder-Fire moxibustion alone or in combination with other therapies for LDH. Two evaluators independently extracted data. We assessed the quality of inclusive studies through a Cochrane risk of bias tool. Meta-analyses were performed using Review Manager (Version 5.5). Data was analyzed using fixed-effects or random-effects models, depending on the heterogeneity test results.

Results: The meta-analysis included 17 studies involving 1344 patients with LDH. The analysis results were as follows: compared with other therapies, the efficacy of thunder-fire moxibustion was statistically significant; the total effective rate (RR = 1.20; 95%CI [1.15, 1.26]; $P < .00001$), the Japanese orthopaedic association score (MD = 4.42; 95%CI [4.10, 4.73]; $P < .00001$), the pain score (SMD = -2.66; 95% CI [-3.39, -1.94]; $P < .00001$). Only 2 reported no adverse events in the included literature, and the remaining had no relevant records. The quality of the evidence in the 17 papers we examined was low or very low.

Conclusion: Thunder-Fire moxibustion is effective in relieving discomfort in patients with LDH. It has significant clinical efficacy, but there is still a need for prospective, multicentre, large-sample randomized controlled trials to enhance the clinical evidence due to the quality of included studies and methodological limitations.

Abbreviations: JOA = Japanese orthopaedic association, LDH = lumbar disc herniation, ODI = Oswestry disability index, SF-36 = 36-item short-form health survey, VAS = visual analog scale.

Keywords: lumbar disc herniation (LDH), meta-analysis, meta-analysis, systematic review, thunder-fire moxibustion

Many studies show that **moxibustion is superior to western medicine**, with a low rate of complications and adverse events. Besides, the costs of moxibustion therapy are within the patient's reach.

Moxibustion can regulate the immune function, and the warming effect can enhance the phagocytosis of cells, improve the blood circulation, reduce the excitability of nerves, and eliminate the inflammation of nerves.

At present, the most frequently used acupoints in clinical practice are:

- ”Yaoyangguan” (DU 3)
- ”ashi acupoints”
- ”Guanyuanshu” (BL 26)
- ”Weizhong” (BL 40).

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Study Protocol Clinical Trial

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Keywords: guideline, lumbar disc herniation, moxibustion

TIPI DI MOXIBUSTIONE



Moxibustione Diretta
(Solo per un MTCV)



Moxibustione
Indiretta



TIPI DI MOXA

- Puro Moxa (M. INDIRECTA)
- Carbón de Moxa (M. INDIRECTA)
- Lana de moxa (M. DIRECTA)



DOVE PRATICARE LA MOXIBUSTIONE

1. Punti

2. Muscoli

3. Articolazioni





STRUMENTI





XXIV S.I.A.V. International Congress
The “Three treasures” in the geriatric animal
Rome, Italy 12-14 October 2023



**«MOXIBUSTIONE:
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Barcelona (Catalunya)
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