Prospects and Challenges of Traditional Medicine in a Global Context

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Part I

Role of Chinese Medicine in Taiwan’s Health Care

Dr. I. Wilmut and a cloned sheep named “Dolly”
Taiwan (臺灣)’s Background (2007)

- 11 medical schools for WM, 2 for CM.
- No. of CM doctors (中醫師) : 4,862 (0.21/1000 people) No. of WM doctors (醫師) : 35,849 (1.56/1000 people)
  (CM:WM ratio 中:西医師比: 1:7.4)
- Committee on Chinese Medicine & Pharmacy (CCMP) established in 1995, under Department of Health, Taiwan (衛生署中醫藥委員會).

Chinese Medicine in Taiwan

- Minor role as compared with WM.
- Accounts for 4-5% of the annual expenditure of National Health Insurance System.
- > 60% of the workforce did not receive professional college training.
- Usage by the Taiwanese is common and popular.
Issues of Chinese Medicine in Taiwan (1)

1. How to ensure that CM doctors receive proper professional college?

2. Under-reporting of CM usage by patients who visit WM doctors, which may increase the incidence of adverse drug interactions between CM and WM.

Issues of Chinese Medicine in Taiwan (2)

3. How to improve the evidence base of CM so that patients’ health and the medical community are better served?

4. How to incorporate some basic knowledge of CM into the curriculum of WM schools or continued medical education so that WM doctors can better communicate with patients and comprehend their illness?

Not all that is important is countable, Not all that is countable is important.

Quantitative approach is essential and crucially important to gain credence in the mainstream medicine.

新聞重點

台中醫藥研究之問題與挑戰

三、中醫師研究多散漫，欠缺焦點，也沒有對一研究課題有多年、持續之探索、鑽研，學術成果欠佳。

四、中、西醫缺乏對談，激盪。

Asian governments hope that high-volume screening and rigorous clinical trials will unlock the secrets of ancient herbal remedies—and that the results will pass muster with Western scientists.

The New Face of Traditional Chinese Medicine

10 January 2003 Vol. 299 Science
Unconventional Medicine in the United States: Prevalence, Costs, and Patterns of Use

- 1539 adults interviewed
- 34% reported use of unconventional therapy
- The majority used for chronic conditions
- Number of visits exceeded that to general physicians
- Out-of-pocket expenditure comparable to that of hospitalizations


Eisenberg DM, Davis RB, Ettner SL, et al.

JAMA 1998;280:1569-75.


Significant Steps in U.S.A.

2004 → Guidance for Industry Botanical Drug Product issued by FDA.
2006 → First Botanical Drug (Veregen) approved by FDA.


Table 1. Primary endpoint efficacy results of intent-to-treat trial

<table>
<thead>
<tr>
<th></th>
<th>Study CT 1017</th>
<th>Study CT 1018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Placebo 10% Veregen ointment 15% Veregen ointment Placebo 10% Veregen ointment 15% Veregen ointment</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>103</td>
<td>199</td>
</tr>
<tr>
<td>Success (%)</td>
<td>38 (36.0)</td>
<td>99 (49.7)</td>
</tr>
<tr>
<td>Fail (%)</td>
<td>65 (63.1)</td>
<td>100 (50.3)</td>
</tr>
<tr>
<td>P value</td>
<td>0.0384</td>
<td>0.0284</td>
</tr>
</tbody>
</table>

Data were analyzed by Fisher's exact test. Source: US Food and Drug Administration

Advising Patients Who Seek Alternative Medical Therapies

- Alternative medical therapies in great demand
- Patient safety
- Documentation in the patient record
- Physicians and patients share decision making

Some Evidence-Based Examples of Chinese Medicine (1)--- Acupuncture

- Effective for the treatment of postoperative and chemotherapy-induced nausea and vomiting, and postoperative dental pain.

2. Qinghaosu (Artemisinin 青蒿素)

- The endoperoxide bridge essential for antimalarial activity.
- Concentrated in parasitized erythrocytes;
- Over 1 million patients treated with qinghaosu, meta-analysis indicated superiority in fever and parasite clearance time over conventional drugs.

青蒿 (Artemesia annua)
Artemisinin is extracted from the leaves of *Artemisia annua*.

"瘧疾寒熱"

"用青蒿一握，水二升，擣汁服之。"

明 李時珍 本草綱目 (1596 A.D.)


All-trans retinoic acid/As$_2$O$_3$ combination yields a high quality remission and survival in newly diagnosed acute promyelocytic leukemia


PNAS 2004; 101: 5328-5335.

Use of Arsenic Trioxide (As$_2$O$_3$) in the Treatment of Acute Promyelocytic Leukemia (APL): I. As$_2$O$_3$ Exerts dose-Dependent Dual Effects on APL Cells


Blood 1997; 89: 3345-53.

Fig 5. Production of the first arsenic preparation by the Harbin Medical University (1995). Courtesy of L. Deyn.
Use of Arsenic Trioxide ($\text{As}_2\text{O}_3$) in the Treatment of Acute Promyelocytic Leukemia (APL): II. Clinical Efficacy and Pharmacokinetics in Relapsed Patients


_Blood_ 1997; 89: 3354-60.

Complete Remission after Treatment of Acute Promyelocytic Leukemia with Arsenic Trioxide


In conclusion, combination of induction of apoptosis and partial differentiation could be the main cellular mechanisms of $\text{As}_2\text{O}_3$ in the treatment of APL, and PML-RAR$\alpha$ could play an important role in determining the specific effects of $\text{As}_2\text{O}_3$ on APL cells.
Conclusions

Low doses of arsenic trioxide can induce complete remissions in patients with APL who have relapsed. The clinical response is associated with incomplete cytodifferentiation and the induction of apoptosis with caspase activation in leukemic cells.


Arsenic Trioxide

- Among 40 APL patients, 34 patients (85%) achieved a complete remission.

Ginkgo biloba for Prevention of Dementia

A Randomized Controlled Trial

- DeKosky ST et al., JAMA. 2008;300:2253-62
- 3069 patients with normal or mild-cognitive impairment were randomized to 2 gr.
- Gb (120 mg, bid) or placebo for 6.1 years
- Similar dementia rates (3.3 vs. 2.9/100 person years for Gb vs. placebo).
- Adverse events equally distributed between Gb and placebo groups.

Table 1. Baseline Characteristics of Study Participants by Study Drug Assignment (Ginkgo biloba vs Placebo)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Placebo (n = 154)</th>
<th>Ginkgo (n = 154)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD), y</td>
<td>73.1 (3.3)</td>
<td>71.1 (3.3)</td>
<td>.88</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>716 (47)</td>
<td>722 (49)</td>
<td>.56</td>
</tr>
<tr>
<td>Male</td>
<td>808 (53)</td>
<td>843 (55)</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1448 (93)</td>
<td>1482 (92)</td>
<td>.23</td>
</tr>
<tr>
<td>Nonwhite</td>
<td>76 (5)</td>
<td>63 (4)</td>
<td></td>
</tr>
<tr>
<td>Cognitive test scores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMSE, mean (SD)</td>
<td>93.3 (4.7)</td>
<td>93.3 (4.7)</td>
<td>.76</td>
</tr>
<tr>
<td>CDR score of 0</td>
<td>622 (67)</td>
<td>910 (65)</td>
<td>.09</td>
</tr>
<tr>
<td>CDR score of 0.5</td>
<td>600 (36)</td>
<td>631 (41)</td>
<td></td>
</tr>
<tr>
<td>ADAS-Cog, mean (SD)</td>
<td>6.4 (2.7)</td>
<td>6.5 (2.8)</td>
<td>.17</td>
</tr>
</tbody>
</table>

A placebo-controlled, double-blind, randomized trial of an extract of *Ginkgo biloba* for dementia

- Le Bars et al., *JAMA* 1997;278:1327-1332.
- 309 demented patients randomized to 2 gr.
- EGB (120 mg/d) or placebo for 52 weeks
- Significantly better cognitive scores in EGB group.
- Adverse events equally distributed between EGB and placebo groups.


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**Ginkgo biloba**

- Introduced into Europe from SE Asia (~1730).
- Launched by *Dr. Willmar Schwabe Co.* in 1965
- EGB761 Patented---- in Germany in 1971
  in France in 1972
  in all European countries in 1994
  in U.S.A. in 1995

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**Ginkgo biloba**
Constituents of EGb761

- Ginkgo-flavonol glycosides: 24%.
- Terpene trilactones: 6%.
  - 3.1% ginkgolides
  - 2.9% bilobalide
- Ginkgolic acids: < 5 ppm (allergenic).

Cultivation of Ginkgo biloba

- South Korea and Japan (1978).
- France (near Bordeaux) in 1982.
- China (山東、江蘇省) in 1996.

Manufacturing of EGb761

- Good Manufacturing Practices.
- Good Laboratory Practices.
- Collaboration of Dr. Willmar Schwabe Co. (Germany) and Institut Henri Beaufour-IPSEN (France)
- in Karlsruhe (Germany).
- in Cork (Ireland) since 1980.

Ginkgo for memory enhancement: a randomized controlled trial

- Solomon et al., JAMA 2002;288:835-40.
- 209 healthy subjects over 60 y/o randomized to 2 groups.
- Ginkgo (40 mg t.i.d.) or placebo for 6 weeks.
- Outcome: No measurable benefit in memory or cognitive function with ginkgo.

Treatment of irritable bowel syndrome with Chinese herbal medicine: a randomized controlled trial

- 痛瀉薬方, 藿香正氣散, 等 20 味藥
- 分組: 固定方(43) vs. 辨證論治方(38) vs. 空白藥(35).
- 療效: 固定方 ≈ 辨證論治方 > 空白藥.
Efficacy of traditional Chinese herbal therapy in adult atopic dermatitis

- 40 patients refractory to western medicine
- Double-blind, placebo-controlled, cross-over
- Two courses of 8-week treatment separated by 4-week wash-out
- Scoring system of erythema and surface damage
- No side-effect.

治療組 (Active group)

1. 防風  6. 淡竹葉
2. 白頭翁  7. 白蘚皮
3. 木通  8. 蒺藜
4. 地黃  9. 甘草
5. 赤芍  10. 荊芥
A controlled trial of traditional Chinese medicinal plants in widespread non-exudative atopic eczema.

- 47 children refractory to western medicine
- Double-blind, placebo-controlled, cross-over
- Two courses of 8-week treatment separated by 4-week wash-out
- Scoring system of erythema and surface damage
- No side-effect.

Evaluation of efficacy of traditional Chinese medicines in the treatment of childhood bronchial asthma: clinical, immunological tests and animal studies


Double-blind, placebo-controlled, multicenter trial.

- 中西醫結合→中醫辨証、西醫診斷測量
- 腎虛→六味地黃丸 vs. placebo (32 vs. 34)
- 脾虛→蔘苓白朮散 vs. placebo (74 vs. 64)
- 腎脾虛→加味四君子湯 vs. placebo (55 vs. 44)

6-month treatment, no significant side effects.

symptom and medication scores, PEFR test.
六 味 地 黃 丸

地黃 (Rehmannia glutinosa)
山茱萸 (Cornus officinalis)
山藥 (Dioscorea batatas)
澤瀉 (Alisma orientalis)
地骨皮 (Lycium chinense)
茯苓 (Pachyma hoelen)

蔘 芳 朮 散

人參 蓮子肉
白朮 枯梗
茯苓 薏苡仁
甘草 陳皮
山藥 縮砂
扁豆

加 味 四 君 子 湯

人參 大棗
白朮 麥門冬
茯苓 五味子
甘草 補骨脂
生薑
Table 1: Changes in the utilization pattern of *Ginkgo biloba* extract in Taiwan from 1997 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total prescriptions</td>
<td>264,657</td>
<td>261,704</td>
<td>271,220</td>
<td>264,657</td>
<td>260,846</td>
<td>277,005</td>
<td>289,605</td>
</tr>
<tr>
<td>No. of prescriptions (%)</td>
<td>419.8</td>
<td>401.8</td>
<td>363.8</td>
<td>356.8</td>
<td>417.2</td>
<td>547.2</td>
<td>417.2</td>
</tr>
</tbody>
</table>

Age (years)

| ≤ 20 | 19 | 41 | 50 | 73 | 41 | 49 | 49 |
| 20–49 | 647 | 635 | 77 | 632 | 839 | 879 | 992 |
| ≥ 50 | 273 | 188 | 17222 | 29986 | 24673 | 2816 | 652 |

*Numbers in parentheses are percentages.


Table 2: Changes in the utilization pattern of aspirin in Taiwan from 1997 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total prescriptions</td>
<td>2,684,879</td>
<td>2,615,098</td>
<td>2,572,390</td>
<td>2,495,787</td>
<td>2,687,759</td>
<td>2,777,717</td>
<td>2,699,607</td>
</tr>
<tr>
<td>Aspirin</td>
<td>2008</td>
<td>42,067</td>
<td>41,642</td>
<td>42,723</td>
<td>1,226</td>
<td>646</td>
<td>936</td>
</tr>
</tbody>
</table>

Age (years)

| ≤ 20 | 42 | 48 | 49 | 52 | 54 | 55 | 55 |
| 20–49 | 1,209 | 1,090 | 1,195 | 1,214 | 1,249 | 1,294 | 1,307 |
| ≥ 50 | 1,272 | 1,287 | 1,395 | 1,477 | 1,554 | 1,554 | 1,554 |

*Numbers in parentheses are percentages.


Table 3: Association between demographic characteristics and utilization pattern of *Ginkgo biloba* extract and aspirin in combination in Taiwan from 1997 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of prescriptions with aspirin and <em>Ginkgo biloba</em> extract combination</td>
<td>692</td>
<td>930</td>
<td>1,277</td>
<td>1,502</td>
<td>1,732</td>
<td>2,109</td>
<td>2,293</td>
</tr>
</tbody>
</table>

Gender

| Male | 419.0 | 431.3 | 451.3 | 463.7 | 532.6 | 522.7 | 569.9 |
| Female | 269 | 431 | 451 | 463 | 532.6 | 522.7 | 569.9 |

Age (years)

| ≤ 20 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 20–49 | 647 | 635 | 77 | 632 | 839 | 879 | 992 |
| ≥ 50 | 273 | 188 | 17222 | 29986 | 24673 | 2816 | 652 |

*Numbers in parentheses are percentages.


Table 4: Frequency and duration of concurrent *Ginkgo biloba* extract and aspirin prescriptions in the ambulatory population of Taiwan from 1997 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
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<td>692</td>
<td>930</td>
<td>1,277</td>
<td>1,502</td>
<td>1,732</td>
<td>2,109</td>
<td>2,293</td>
</tr>
</tbody>
</table>

Duration (days)

| ≤ 91 | 72 | 83 | 84 | 84 | 84 | 84 | 84 |

*Numbers in parentheses are percentages.

A Randomized Controlled Trial of a Chinese Herbal Remedy to Increase Energy, Memory, Sexual Function, and Quality of Life in Elderly Adults in Beijing, China

Stephen Bent, MD, Ting Xa, MD, Li-Fang Lui, MA, M, Michael Nevitt, PhD, Edward Schneider, MD, Guoqin Tian, PhD, Sanham Goo, MD, Steven Cummings, MD, MPH


A randomized, double-blind, placebo-controlled trial to determine whether a herbal remedy, Longevity Treasure, is associated with changes in quality of life, energy, memory, sexual function, and qi (气) in Beijing residents aged ≥60 years.

Table 1. Chinese Herbs in the Active Treatment

<table>
<thead>
<tr>
<th>Herb</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herba Epimedi</td>
<td>8%</td>
</tr>
<tr>
<td>Fortun Lycii Chinensis</td>
<td>18%</td>
</tr>
<tr>
<td>Cordyceps Sinensis</td>
<td>15%</td>
</tr>
<tr>
<td>Herba Cynomorii Songarci</td>
<td>8%</td>
</tr>
<tr>
<td>Herba Cistanches</td>
<td>8%</td>
</tr>
<tr>
<td>Rhiocoma Polygonati</td>
<td>10%</td>
</tr>
<tr>
<td>Radix Astragali</td>
<td>10%</td>
</tr>
<tr>
<td>Radix Rehmanniae</td>
<td>10%</td>
</tr>
<tr>
<td>Glutinosae Conquetae</td>
<td>8%</td>
</tr>
<tr>
<td>Radix Morindce Officinalis</td>
<td>8%</td>
</tr>
</tbody>
</table>

1. A TCM formula (長壽寶) of 10 herbs to increase “yang” (補陽藥).
2. Exclusion of defined high “yang” (陽亢) subjects.
3. Qi (氣) scales consisting of 17 items.
4. A 12-item Short Form Health Survey (SF-12) to assess health and quality of life.
Methods In this double-blind trial, we randomly assigned 225 men over the age of 49 years who had moderate-to-severe symptoms of benign prostatic hyperplasia to one year of treatment with saw palmetto extract (160 mg twice a day) or placebo. The primary outcome measures were changes in the scores on the American Urological Association Symptom Index (AUASI) and the maximal urinary flow rate. Secondary outcome measures included changes in prostate size, residual urinary volume after voiding, quality of life, laboratory values, and the rate of reported adverse effects.
Results  There was no significant difference between the saw palmetto and placebo groups in the change in AUASI scores (mean difference, 0.04 point; 95 percent confidence interval, −0.93 to 1.01), maximal urinary flow rate (mean difference, 0.43 ml per minute; 95 percent confidence interval, −0.52 to 1.38), prostate size, residual volume after voiding, quality of life, or serum prostate-specific antigen levels during the one-year study. The incidence of side effects was similar in the two groups.


A Randomized Controlled Trial of a Chinese Herbal Remedy to Increase Energy, Memory, Sexual Function, and Quality of Life in Elderly Adults in Beijing, China

Stephen Bent, MD, Ling Xu, MD, Li-Ying Lui, MA, M. Michael Neiritt, PhD; Edward Schneider, MD, Guozeng Tian, PhD; Saihan Guo, MD, Steven Cummins, MD, MPH. Am. J. Med. 2003; 115: 441-7.

A randomized, double-blind, placebo-controlled trial to determine whether a herbal remedy, “Longevity Treasure”, is associated with changes in quality of life, energy, memory, sexual function, and “Qi” (氣) in Beijing residents aged ≥60 years.

1. A TCM formula of 10 herbs to increase “yang” (補陽).
2. Exclusion of defined high “yang” (陽亢) subjects.
3. Qi (氣) scales consisting of 17 items.
4. A 12-item Short Form Health Survey (SF-12) to assess health and quality of life.

<table>
<thead>
<tr>
<th>Herb</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herba Epimedii</td>
<td>湿羊藿 8%</td>
</tr>
<tr>
<td>Fructus Lycii Chinensis</td>
<td>柿肥子 15%</td>
</tr>
<tr>
<td>Cordyceps Sinensis</td>
<td>冬蟲夏草 15%</td>
</tr>
<tr>
<td>Herba Cynomorii Songarici</td>
<td>陽陽 8%</td>
</tr>
<tr>
<td>Herba Gliachi</td>
<td>肉桂 8%</td>
</tr>
<tr>
<td>Rhizoma Polygonati</td>
<td>黃精 10%</td>
</tr>
<tr>
<td>Radix Astragali</td>
<td>黃耆 10%</td>
</tr>
<tr>
<td>Radix Rehmanniae</td>
<td>生地黃 10%</td>
</tr>
<tr>
<td>Glutinosae Consimilae</td>
<td>熟地黃 8%</td>
</tr>
<tr>
<td>Radix Morindae Officinalis</td>
<td>巴戟天 8%</td>
</tr>
</tbody>
</table>
Acute treatment of moderate to severe depression with hypericum extract WS 5570 (St John's wort); randomised controlled double blind non-inferiority trial versus paroxetine

A Szegedi, R Kohnen, A Dienel and M Klieser

BMJ 2005;330:503-7; originally published online 11 Feb 2005;

Table 4. Adverse Events in the Treatment and Placebo Groups

<table>
<thead>
<tr>
<th>Adverse Event</th>
<th>Placebo (n = 119)</th>
<th>Chinese Herbs (n = 118)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>0</td>
<td>1 (0.9)</td>
<td>0.31</td>
</tr>
<tr>
<td>Upper respiratory</td>
<td>1 (0.8)</td>
<td>1 (0.9)</td>
<td>1.00</td>
</tr>
<tr>
<td>Irradiated tract</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral ulcer</td>
<td>0</td>
<td>2 (1.7)</td>
<td>0.15</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>7 (5.9)</td>
<td>13 (12.7)</td>
<td>0.07</td>
</tr>
<tr>
<td>Chest pain</td>
<td>1 (0.8)</td>
<td>0</td>
<td>0.32</td>
</tr>
<tr>
<td>Nausea</td>
<td>1 (0.8)</td>
<td>1 (0.9)</td>
<td>1.00</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>4 (3.4)</td>
<td>2 (1.7)</td>
<td>0.41</td>
</tr>
<tr>
<td>Constipation</td>
<td>4 (3.4)</td>
<td>2 (1.2)</td>
<td>0.41</td>
</tr>
<tr>
<td>Flatulence</td>
<td>3 (2.5)</td>
<td>4 (3.4)</td>
<td>0.69</td>
</tr>
<tr>
<td>Cough</td>
<td>1 (0.8)</td>
<td>0</td>
<td>0.32</td>
</tr>
<tr>
<td>Insomnia</td>
<td>0</td>
<td>2 (1.7)</td>
<td>0.15</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.8)</td>
<td>1 (0.9)</td>
<td>1.00</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>31</td>
<td>0.24</td>
</tr>
</tbody>
</table>

Figure: Flowchart showing enrollment and follow-up of study participants.
Acupuncture for Patients With Migraine: A Randomized Controlled Trial

Linde K., Streng A., Jürgens S. et. al.

Treatment of low back pain by acupressure and physical therapy: randomized controlled trial

LL-C Hsieh, C-H Kuo, L-H Lee, AM-F Yen, K-L Chien, TH-H Chen


An Evaluation of Echinacea angustifolia in Experimental Rhinovirus Infections


Methods

Three preparations of echinacea, with distinct phytochemical profiles, were produced by extraction from E. angustifolia roots with supercritical carbon dioxide, 60 percent ethanol, or 20 percent ethanol. A total of 437 volunteers were randomly assigned to receive either prophylaxis (beginning seven days before the virus challenge) or treatment (beginning at the time of the challenge) either with one of these preparations or with placebo. The results for 399 volunteers who were challenged with rhinovirus type 39 and observed in a sequestered setting for five days were included in the data analysis.

Results

There were no statistically significant effects of the three echinacea extracts on rates of infection or severity of symptoms. Similarly, there were no significant effects of treatment on the volume of nasal secretions, on polymorphonuclear leukocyte or interleukin-8 concentrations in nasal-lavage specimens, or on quantitative-virus titer.

Effects of electroacupuncture in reducing weight and waist circumference in obese women: a randomized crossover trial

C-H Hsu, K-C Hwang, C-L Chao, J-G Lin, S-T Kao, P Chou.

Effects of tai chi mind-body movement therapy on functional status and exercise capacity in patients with chronic heart failure: A randomized controlled trial

Yeh GY, Wood MJ, Lorell BH, Stevenson LW, Eisenberg DM. et. al.


Purpose

To examine the effects of a 12-week tai chi program on quality of life and exercise capacity in patients with heart failure.

Methods

30 patients with chronic stable heart failure and left ventricular ejection fraction (EF) ≤40% (age, 64 ± 13 years; baseline EF, 23% ± 7%; median NYHA class, 2) were randomly assigned to receive usual care (n = 15), which included pharmacologic therapy and dietary and exercise counseling, or 12 weeks of tai chi training (n = 15) in addition to usual care. Tai chi training consisted of a 1-hour class held twice weekly. Primary outcomes included quality of life and exercise capacity. Secondary outcomes included serum B-type natriuretic peptide and plasma catecholamine levels.

Results

At 12 weeks, patients in the tai chi group showed improved quality-of-life scores (mean between-group difference in change, -25 points, P = 0.001), increased distance walked in 6 minutes (135 meters, P = 0.001), and decreased serum B-type natriuretic peptide levels (-138 pg/mL, P = 0.03) compared with patients in the control group. A trend towards improvement was seen in peak oxygen uptake. No differences were detected in catecholamine levels.
Conclusion

Tai chi may be a beneficial adjunctive treatment that enhances quality of life and functional capacity in patients with chronic heart failure who are already receiving standard medical therapy.

Neuronal specificity of acupuncture response: a fMRI study with electroacupuncture


2 Hz EAS

100 Hz EAS

Part III:
Adverse Reactions and Interactions

The effects of Danshen (Salvia miltiorrhiza) on pharmacokinetics and pharmacodynamics of warfarin in rats

Lo AC, Chan K, Yeung JH, and Woo KS.


Hazardous pharmacokinetic interaction of Saint John's wort (*Hypericum perforatum*) with the immunosuppressant cyclosporin.

Mai I, Kruger H, Budde K, et al.

Variability in commercial ginseng products: an analysis of 25 preparations

Harkey MR, Henderson GL, Gershwin ME, Stern JS, and Hackman RM.