

EBM Conference

中醫部

報告者：吳瀚德 R3

指導者：林宏隆 VS

2010-1-14



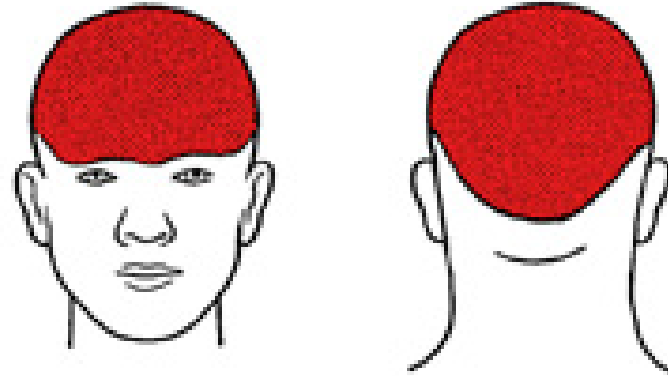
Clinical Scenario



Patient Profile

- 姓名：吳 X 絹
- 病歷號碼：097246**
- 年齡：39歲
- 婚姻：已婚，有二女。
- 職業：護理師
- 居住地：高雄市

History



- 39歲病患於12月至門診，主訴為長期兩額、後枕出現疼痛，檢查時發現後頸、肩肌肉有壓痛點，摸到多個肌肉硬結，顯示頸肌正處於收縮的狀態。病患自覺頭痛性質為鈍痛、脹痛，有壓迫感，有時有被緊箍的感覺。診斷為緊張頭痛，開一週中藥內服。
- 病患頭頸部無外傷史，頭痛症狀常因工作緊張(打電腦、整理病歷與評鑒資料等)而復發。
- 再至腦神經內科，診斷為tension headache，給予止痛藥+肌肉鬆弛劑治療。
- 一週後回中醫門診，希望有其它治療方式。

Current Condition

- CT of head : Normal

Acupuncture plan and goal :

- 縮短頭痛時間與程度。
- 預防頭痛。

Patient's Inquiry

- 病人詢問，除了固定每天服藥外，是否能配合其他治療方式。
- 針灸是否能改善緊張性頭痛？



Evidence-based Medicine



EBM Steps

- Asking
- Acquire
- Appraisal
- Application
- Audit



Asking



Asking an answerable question

Q : Is acupuncture effective in treating **tension-type headache**?

Question

P atient	Patient with tension-type headache
I ntervention	acupuncture
C omparison	Routine care
O utcome	Pain reduction, frequency, intensity, analgesic use

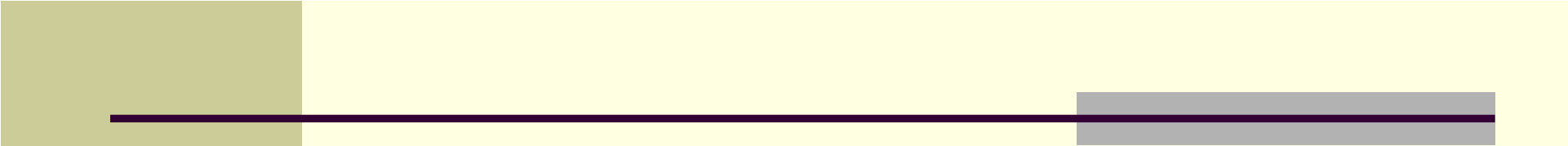
Tracking down the best evidence

- 先從已評讀的database開始找起(system, summary, synopses, synthesis) ，最後再找尚未經過嚴格評讀的study 。


Search strategy design

- Keywords :
 - headache
 - acupuncture

- Database :
 - Uptodate
 - DynaMed
 - ACP Journal Club
 - Pubmed
 - Cochrane Library



Acquire



The "5S" levels of organisation of evidence from healthcare research

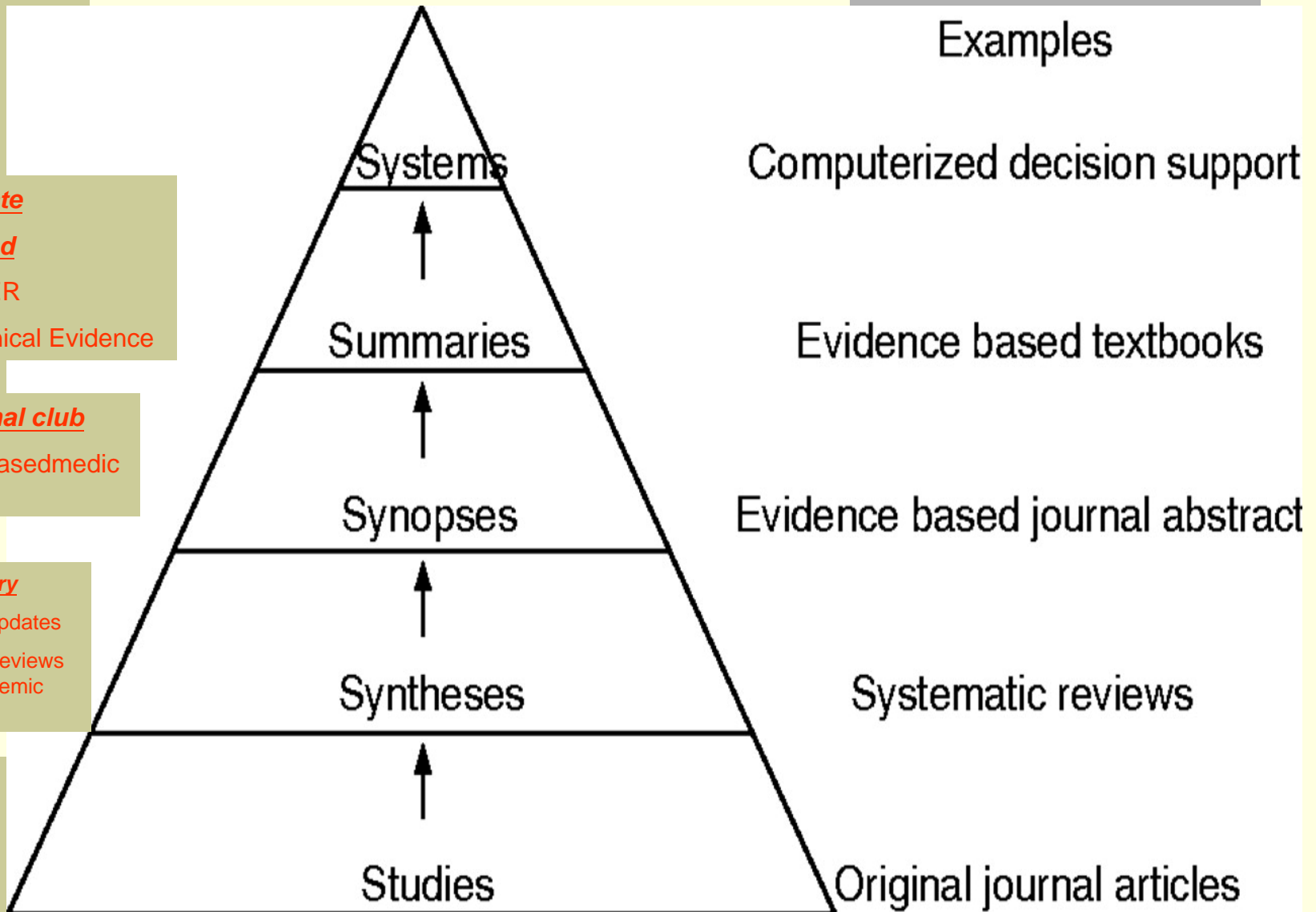
Brian Haynes. R Evid Based Med 2006;11:162-164

UpToDate
DynaMed
ACP PIER
BMJ Clinical Evidence

ACP journal club
Evidencebasedmedicine.com

Cochrane Library
BMJ Evidence Updates
Other Systemic reviews
eg. PubMed systemic review

PubMed
SUMsearch
TRIP
Google



System

- DynaMed
 - acupuncture may be effective for tension headaches (level 2 [mid-level] evidence)
 - acupuncture may be more effective than placebo acupuncture for various types of pain (level 2 [mid-level] evidence)
 - acupuncture plus routine care associated with fewer headache days and decreased pain intensity (level 2 [mid-level] evidence)
 - acupuncture may reduce number of days with tension-type headache (level 2 [mid-level] evidence)

Synopses

- ACP Journal Club

Acupuncture for Chronic Headaches — An Epidemiological Study Headache 2007

Studies

- PubMed

**Acupuncture for Tension-Type Headache :
A Meta-Analysis of Randomized, Controlled Trials**
The Journal of Pain, Vol 9, No 8 (August), 2008: pp 667-677

Syntheses

- Cochrane Review
 - One systematic review found

Acupuncture for tension-type headache (Review)

*Cochrane Database of Systematic Reviews,
Issue 4, 2009*

Objectives

- To investigate whether acupuncture is a) more effective than no prophylactic treatment/routine care only; b) more effective than 'sham' (placebo) acupuncture; and c) as effective as other interventions in reducing headache frequency in patients with episodic or chronic tension-type headache.

Search strategy

- TheCochrane Pain, Palliative&SupportiveCareTrialsRegister,CENTRAL,MEDLINE, EMBASE and theCochraneComplementary Medicine Field Trials Register were searched to January 2008.

Selection criteria

- The author included randomized trials with a post-randomization observation period of at least 8 weeks that compared the clinical effects of an acupuncture intervention with a control (treatment of acute headaches only or routine care), a sham acupuncture intervention or another intervention in patients with episodic or chronic tension-type headache.

Data collection and analysis

- Two reviewers checked eligibility; extracted information on patients, interventions, methods and results; and assessed risk of bias and quality of the acupuncture intervention.
- Outcomes extracted included response (at least 50% reduction of headache frequency; outcome of primary interest), headache days, pain intensity and analgesic use.

Main results (1)

- Eleven trials with 2317 participants (median 62, range 10 to 1265) met the inclusion criteria. Two large trials compared acupuncture to treatment of acute headaches or routine care only. Both found statistically significant and clinically relevant short-term (up to 3 months) benefits of acupuncture over control for response, number of headache days and pain intensity.
- Long-term effects (beyond 3 months) were not investigated.

Main results (2)

- Six trials compared acupuncture with a sham acupuncture intervention, and five of the six provided data for meta-analyses.
- Small but statistically significant benefits of acupuncture over sham were found for response as well as for several other outcomes. Three of the four trials comparing acupuncture with physiotherapy, massage or relaxation had important methodological or reporting shortcomings.
- Their findings are difficult to interpret, but collectively suggest slightly better results for some outcomes in the control groups.

Authors' conclusions

- In the previous version of this review, evidence in support of acupuncture for tension-type headache was considered insufficient. Now, with six additional trials, the authors conclude that acupuncture could be a valuable non-pharmacological tool in patients with frequent episodic or chronic tension-type headaches.



Appraisal

Acupuncture for tension-type headache (Review)

Cochrane Database of Systematic Reviews, Issue 4, 2009

Level	與[治療/預防/病因/危害]有關的文獻
1a	用多篇RCT所做成的綜合性分析(SR of RCTs)
1b	單篇RCT(有較窄的信賴區間)
1c	All or none
2a	用多篇世代研究所做成的綜合性分析
2b	單篇cohort及低品質的RCT
2c	Outcome research / ecological studies
3a	SR of case-control studies
3b	Individual case-control studies
4	Case-series (poor quality :cohort / case-control studies)
5	沒有經過完整評讀醫學文獻的專家意見

1. Did the review ask a clearly-focused question?

Yes

Can't tell

No

Consider if the question is 'focused' in terms of:

– the population studied

– the intervention given or exposure

– the outcomes considered

- Objectives : To investigate whether acupuncture is a) more effective than no prophylactic treatment/routine care only; b) more effective than sham (placebo) acupuncture; and c) as effective as other interventions in reducing headache frequency in patients with episodic or chronic tension-type headache.
- 11 large trials compared acupuncture to treatment of acute headaches or routine care only. Both found statistically significant and clinically relevant short-term (up to 3months) benefits of acupuncture over control for response, number of headache days and pain intensity.

2. Did the review include the right type of study?

 Yes Can't tell No

Consider if the included studies:

- address the review's question*
- have an appropriate study design*

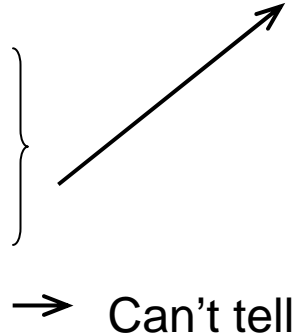
- Types of studies: RCTs
- Types of participants: tension-type headache
- Types of interventions: acupuncture
 - acupuncture vs. no treatment
 - acupuncture vs. sham acupuncture
 - acupuncture vs. drugs, relaxation, physical therapies
- Outcome measures:
 - Studies were included if they reported at least one clinical outcome related to headache (for example, response, frequency, pain intensity, headache scores, analgesic use).
 - Trials reporting only physiological or laboratory parameters were excluded, as were trials with outcome measurement periods of less than 8 weeks (from randomization to final observation).

3. Did the reviewers try to identify all relevant studies?

Consider:

- which bibliographic databases were used
- if there was follow-up from reference lists
- if there was personal contact with experts
- if the reviewers searched for unpublished studies
- if the reviewers searched for non-English-language studies

Yes Can't tell No



- Database: TheCochrane Pain, Palliative&SupportiveCareTrialsRegister,CENTRAL, MEDLINE, EMBASE and theCochraneComplementary Medicine Field Trials Register were searched to January 2008.
- Search reference lists of all relevant papers
- Authors of relevant studies were contacted to elicit any unpublished or on-going studies

4. Did the reviewers assess the quality of the included studies?

Yes Can't tell No

Consider:

- if a clear, pre-determined strategy was used to determine which studies were included. Look for:*
- a scoring system*
- more than one assessor*

- Two reviewers checked eligibility; extracted information on patients, interventions, methods and results; and assessed risk of bias and quality of the acupuncture intervention.
- Outcomes extracted included response (at least 50% reduction of headache frequency; outcome of primary interest), headache days, pain intensity and analgesic use.

5. If the results of the studies have been combined, was it reasonable to do so?

Yes Can't tell No

Consider whether:

- the results of each study are clearly displayed*
- the results were similar from study to study (look for tests of heterogeneity)*
- the reasons for any variations in results are discussed*

■ Three sections

- acupuncture vs. no treatment
 - acupuncture vs. sham acupuncture
 - acupuncture vs. drugs, relaxation, physical therapies
- Pooled random-effects estimates, their 95% confidence intervals, the Chi²-test for heterogeneity and the I²-statistic were calculated for each time window for each of the outcomes listed above for the comparison with sham interventions.
- Due to the variable study methods, pooled effect size estimates have to be interpreted with great caution.

6. How are the results presented and what is the main result?

Consider:

- *how the results are expressed (e.g. odds ratio, relative risk, etc.)*
- *how large this size of result is and how meaningful it is*
- *how you would sum up the bottom-line result of the review in one sentence*

- acupuncture vs. no treatment
 - Significant differences in favor of acupuncture for pain reduction, pain intensity, and headache scores.
- acupuncture vs. sham acupuncture
 - Only one trial (Endres 2007) found significant differences in regard to response and number of headache days.
- acupuncture vs. conventional physical therapy
 - Both studies found significant benefits of acupuncture over control for the outcomes responder rate, headache frequency and intensity.
- Results expressed in **Standard Mean Difference** and **Risk Ratio**

7. How precise are these results?

Consider:

- if a confidence interval were reported. Would your decision about whether or not to use this intervention be the same at the upper confidence limit as at the lower confidence limit?
- if a p-value is reported where confidence intervals are unavailable

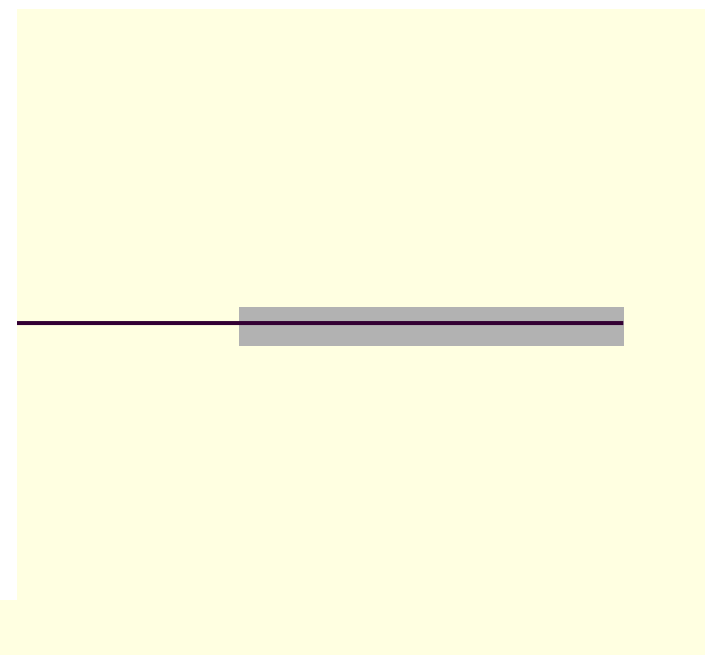


Figure 1. Forest plot of comparison: 1 Acupuncture vs. no acupuncture, outcome: 1.1 Response.

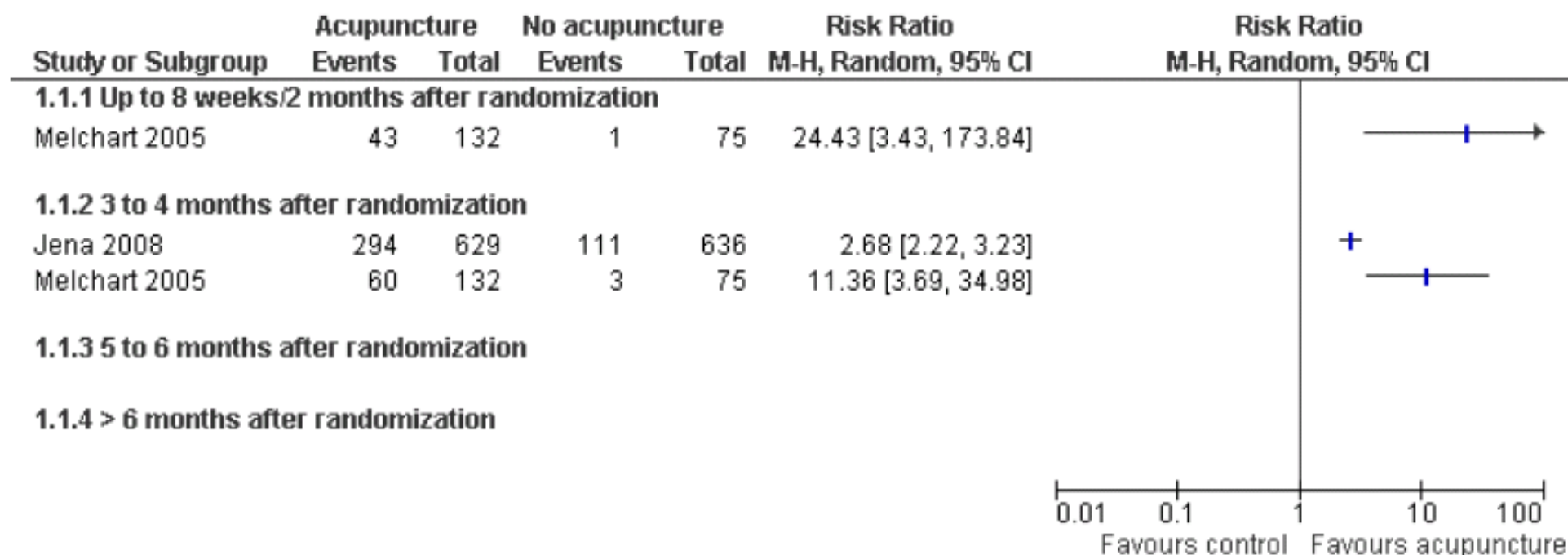


Figure 2. Forest plot of comparison: 1 Acupuncture vs. no acupuncture, outcome: 1.2 Number of headache days.

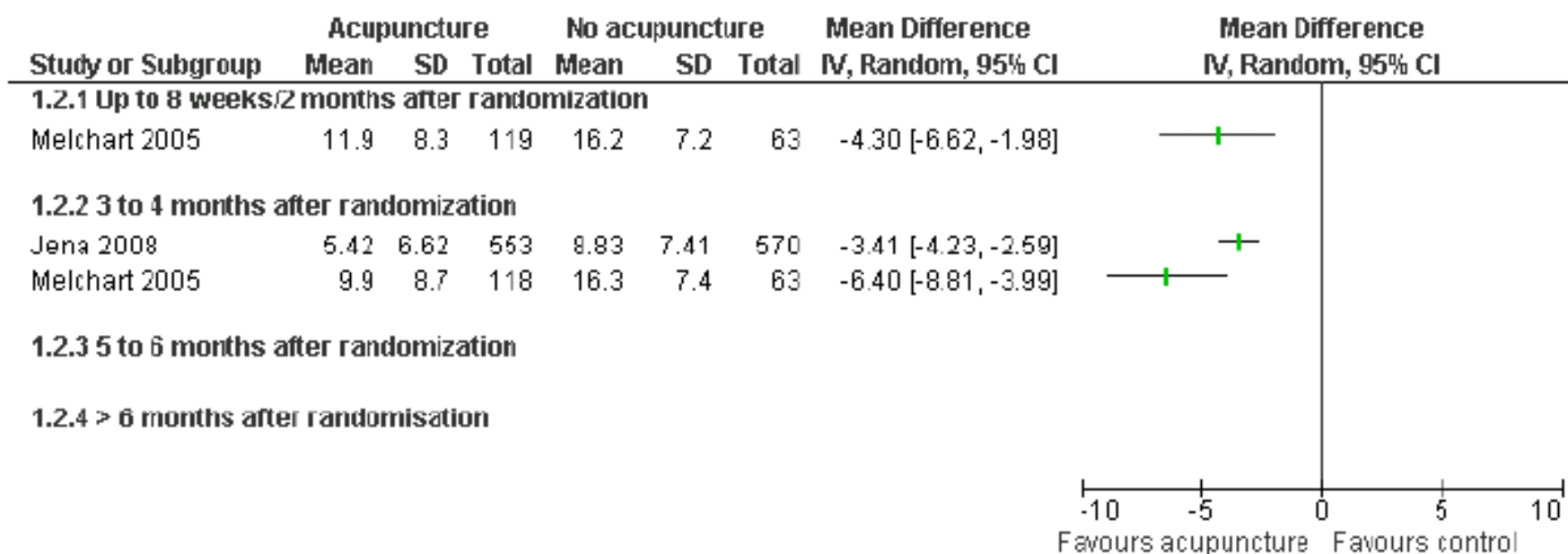
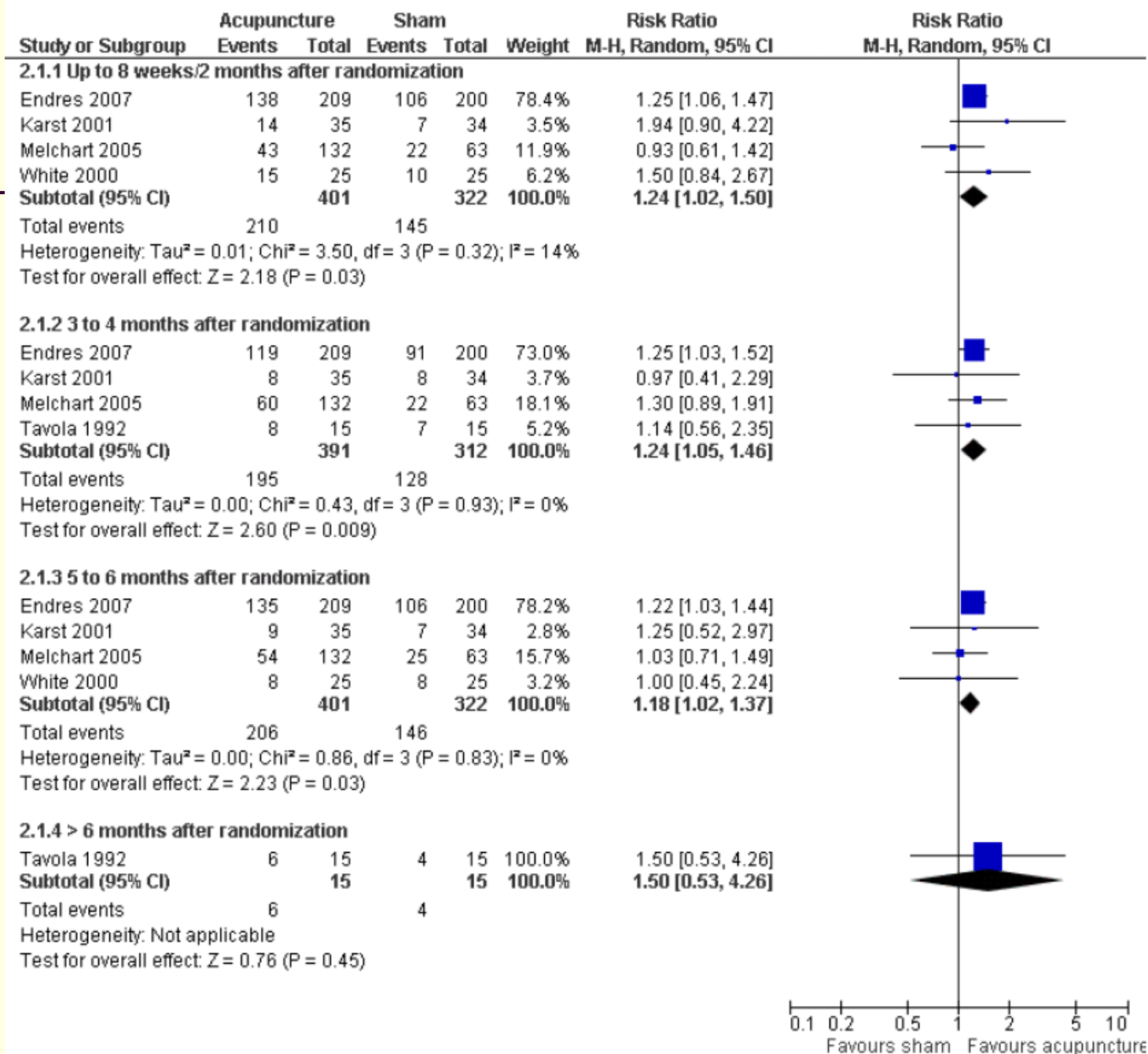


Figure 3. Forest plot of comparison: 2 Acupuncture vs. sham interventions, outcome: 2.1 Response.



8. Can the results be applied to the local population?

Yes

Can't tell

No

Consider whether:

- the population sample covered by the review could be different from your population in ways that would produce different results*
- your local setting differs much from that of the review*
- you can provide the same intervention in your setting*

- Participant : **tension-type headache** population
- Type of acupuncture used

9. Were all important outcomes considered?

Yes Can't tell No

Consider outcomes from the point of view of the:

- individual*
- policy makers and professionals*
- family/carers*
- wider community*

Types of outcome measures :

- Studies were included if they reported at least one clinical outcome related to headache (for example, response, frequency, pain intensity, headache scores, analgesic use).
- Trials reporting only physiological or laboratory parameters were excluded, as were trials with outcome measurement periods of less than 8 weeks (from randomization to final observation).



Application

-
- Acupuncture is often used as a intervention to reduce the frequency and intensity of headaches.
 - acupuncture + routine care vs. routine care
 - acupuncture vs. routine care
 - Lack of an experimental basis for the dose of acupuncture investigated
 - Further caution is suggested because the results of this review were mostly informed from data from single studies rather than two or more studies

醫療現況	病人意願
acupuncture對於tenstion-type headache的改善確實有助益，但回復程度及速度根據頭痛程度有所不同。	除了接受藥物治療以外，病人希望藉由其他輔助療法幫助頭痛更快好起來。
生活品質	社會脈絡
若能加速改善頭痛的症狀，對於日常生活活動獨立性增加，改善病人生活品質。	頭痛改善程度影響病人日常生活與工作的表現以及社交活動參與度。



Audit



Audit

Self-Evaluation

- 能提出結構完整的臨床問題
- 能有效率搜尋臨床領域中最佳證據來源
- 可將審慎評估之結果融入臨床診療中，適當應用於病人身上。



Thank You for Your Attention

