

實證醫學病例討論報告

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Outline

- Clinical scenario-臨床場景
- Asking-提出問題
- Acquire- 搜尋資料
- Appraisal-嚴格評讀
- Apply-臨床應用
- Audit-自我評估

Clinical scenario-臨床場景

- 1.Patient profile
病人基本資料及主訴
- 2.Assessment
評估（包含症狀、理學檢查、實驗室檢查、影像學檢查）
- 3.Treatment
治療方式及對治療的反應
- 4.Plan
後續治療計畫

Clinical scenario-基本資料及主訴

- This is a 27 year-old male patient without underlying disease but with smoking history for several years.
- This time, he came to our family medicine clinic due to severe headache for a period of time.

Clinical scenario

- Headache characteristics: throbbing and stabbing sensation, position over peri-orbital areas. Pain attacks last for > 3 hours. Sudden onset, duration lasting at least for 2 weeks.
- Other associated symptoms were: nausea/vomiting(-/-), blurred vision(-), numbness(-), tearing while headache(+), congestive conjunctiva(+), rhinorrhea(+), nasal obstruction(+).

Clinical scenario

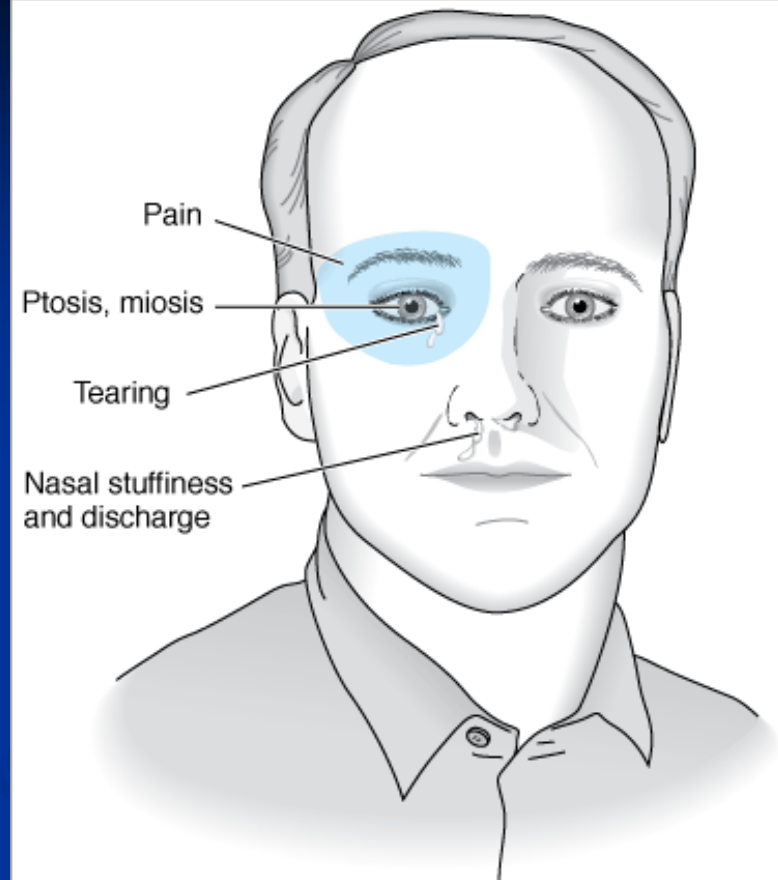
- In suspicion of primary headache, suspected cluster headache, some analgesics(NSAID) were prescribed for symptom relief. OPD follow-up was arranged the next week.
- After one week, he didn't feel better after taking medications for headache.
- Then, he asked if complementary and/or alternative medical (CAM) approaches are effective??

提出 background questions

*What is cluster headache and how
to manage it?*

- a rare form of primary headache (0.1%)
- Male > Female
- 20 ~ 30 years old
- rarely a family history
- commonly occur at night, awakening the patient from sleep, and recur daily, often at nearly the same time of day, for a cluster period of weeks to months.
- Between clusters, the patient may be free from headaches for months or years.

Figure 2-14.



Source: Simon RP, Greenberg DA, Aminoff MJ:
Clinical Neurology, 7th Edition: <http://www.accessmedicine.com>

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Distribution of symptoms and signs in cluster headache.

Treatment

■ Acute

- oxygen inhalation,
- Sumatriptan 6 mg subcutaneously,
- Sumatriptan (20 mg) and zolmitriptan (5 mg) nasal sprays

■ Preventive

- short bouts : oral glucocorticoids
- long-lasting : verapamil

提出 foreground questions

Are complementary and/or
alternative medical (CAM)
approaches for primary headache
effective??

Asking Answerable Clinical Question: PICO

Patient/Problem	A 27 y/o male patient with primary headache(suspect cluster headache)
Intervention	conventional medical management
Comparison	complementary and/or alternative medical (CAM) approaches
Outcomes	headache relief effectiveness

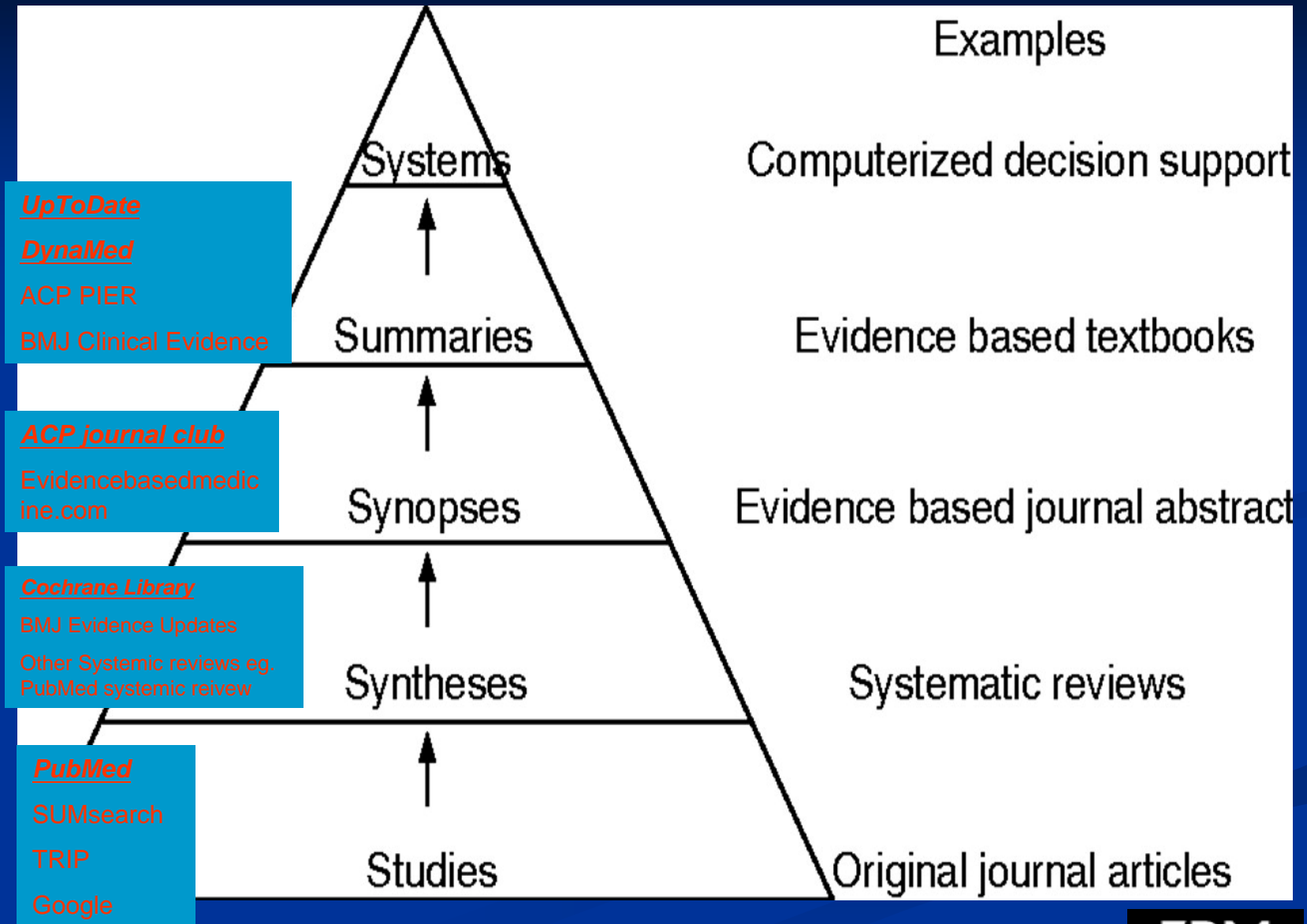
搜尋最有用的資料

先從已經過評讀的database開始找起
(system,synopses,synthesis)

最後再找尚未經過嚴格評讀的study

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

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



搜尋 Summaries



- Key word:
 - Primary headache, cluster headache
 - complementary and alternative medicine
- 搜尋到的文章標題: 0 篇

A screenshot of the UpToDate website search results page. The page header shows the UpToDate ONLINE 18.1 logo and a search bar containing the text "cluster headache, complementary and alt" with a "Search" button. Below the header, there are navigation tabs for "New Search", "Patient Info", "What's New", and "Calculators". The main content area displays "Search Results for 'cluster headache, complementary and alternative medicine'". There are three filter tabs: "All search results" (selected), "Prioritize adult topics", and "Prioritize pediatric topics". A list of search results is shown, with the first result, "Cluster headache: Acute and preventive treatment", underlined in red. Other results include "Paroxysmal hemicrania: Clinical features and diagnosis", "Headache in pregnancy", "Paroxysmal hemicrania: Treatment and prognosis", "Hemicrania continua", "SUNCT and SUNA headache syndromes: Clinical features and diagnosis", "SUNCT and SUNA headache syndromes: Treatment", and "Tension-type headache in adults: Pathophysiology, clinical features, and diagnosis".

搜尋 Synopses

ACP Journal Club , Evidence-Based Medicine

- Key word:
 - Primary headache, cluster headache
 - complementary and alternative medicine
- 搜尋到的文章標題: 0篇

搜尋 Syntheses

The Cochrane library

- Key word:
 - Primary headache, cluster headache
 - complementary and alternative medicine
- 搜尋到的文章標題:2篇
 - 內容非所需
 - Patient quality不合

搜尋 Studies PubMed

- Key word:
 - "Complementary Therapies"[Mesh] AND "Headache Disorders, Primary"[Mesh]
- 搜尋到的文章標題:147篇(review)

Pain Physician 2009; 12:461-470 • ISSN 1533-3159

Systematic Review

Systematic Assessment of the Quality of Research Studies of Conventional and Alternative Treatment(s) of Primary Headache

State of the Data at the Mid-Point of the Decade of Pain Control and Research

Cindy C. Crawford, BA¹, Mylene T. Huynh, MD, MPH², Alyson Kepple¹,
and Wayne B. Jonas, MD¹

- Background :

- Diversity of treatments used for headache, and varied quality of research conduct and reporting make it difficult to accurately assess the literature and to determine the best treatment(s) for patients

- Objectives :

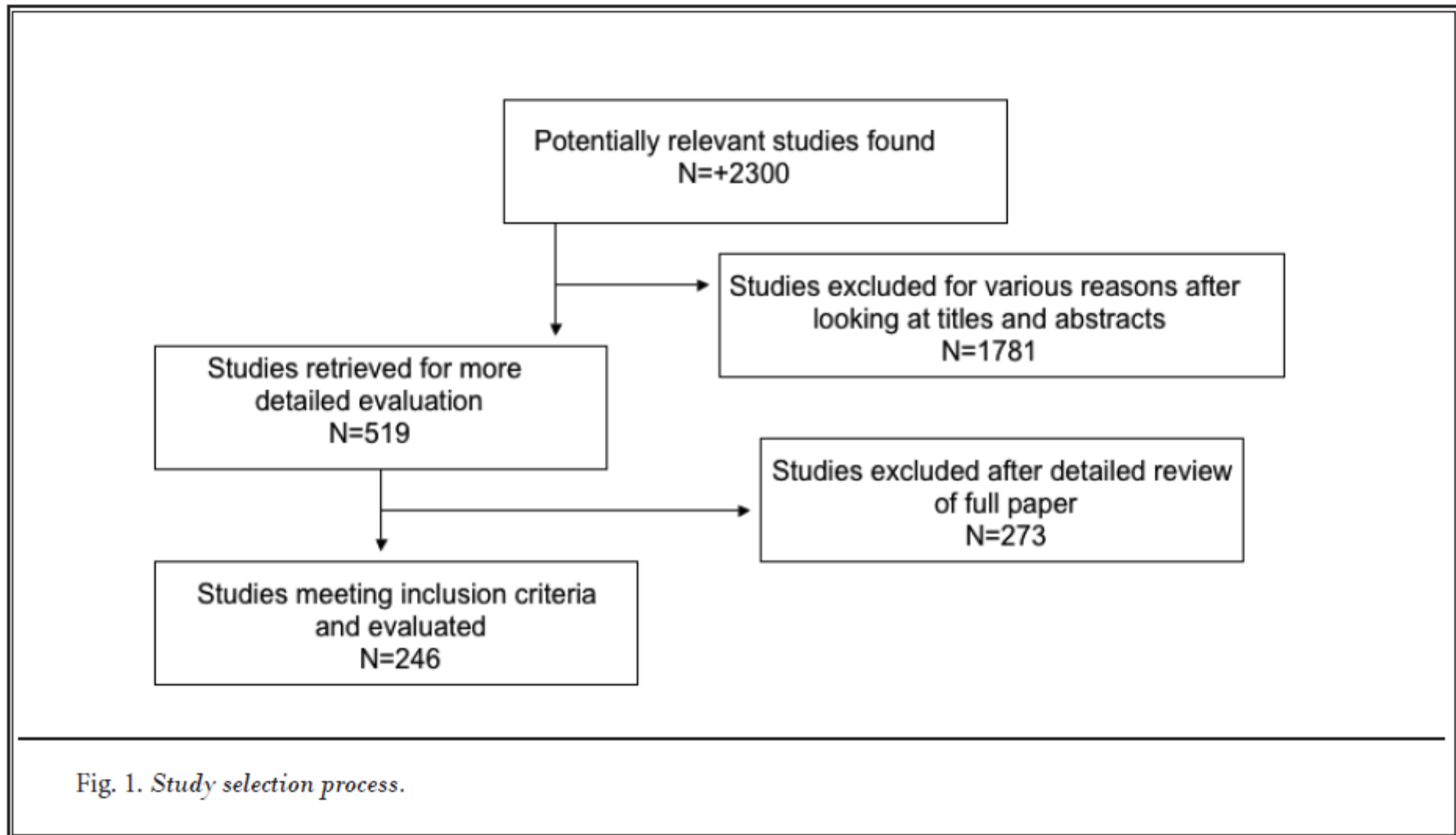
- To compare the quality of available research evidence describing the effects and outcomes of **conventional, and complementary and alternative medicine (CAM)** approaches to treating **primary (migraine, tension, and/or cluster-type) headache**

- Study Design :

- A **systematic review** of quality of research studies of conventional and alternative treatment(s) of primary headache.

- Methods :

- Randomized, controlled clinical trials (RCTs) of treatment(s) of chronic primary headache (in English between 1979 to June 2004) were searched
 - through MEDLINE, PsycInfo, EMBASE, Cochrane Library, and the NIH databases.



Exclusion criteria: non-RCTs and studies of acute headache, secondary headache or headache of organic causes

The Jadad Scale

- a short, well-validated, and easy-to-use instrument for assessing the reporting quality of RCTs.
- 3 items to a maximum score of 5 points
 - randomization criteria: 0, 1, 2
 - double-blinding criteria: 0, 1, 2
 - the description of dropouts and withdrawals: 0, 1

Table I. *Different procedures used for treating chronic headache in our sample of articles.*

	Treatment	Studies N, (%)
Conventional Therapy N=125	Medication	124 (99)
	Diet	1 (1)
CAM Therapy N=121	Relaxation and/or Biofeedback and/or Cognitive Therapy	62 (51.2)
	Acupuncture	23 (19)
	Manipulation	11 (9.1)
	Hypnosis	9 (7.4)
	Homeopathy	5 (4.1)
	Self or group care	4 (3.3)
	Nutritional supplements	4 (3.3)
	TENS	1 (0.8)
	Therapeutic touch	1 (0.8)
	Yoga	1 (0.8)

Table 2. Number of Studies Meeting Specific Quality-Criteria Definitions

Selection Data	Conventional Therapy studies	CAM Therapy studies
Total trials included	125	121
Years	1979-2004	1979-2003
Total patients entering study	30,939	8427
Total patients completing study	28,930	7168
Average sample size entering study	248 (Range=9-22,071)	69 (Range=9-715)
Median sample size entering study	50	46
Mean Jadad Score	3.2 (SD=0.9)	2.2 (SD=1.1)
Jadad score ≥ 3	97 (73%)	38 (28%)
Reported Positive Effects ($P < 0.05$)	100 (80%)	88 (73%)
Double blinding reported	108 (86%)	22 (18%)
Dropout handling reported	98 (78%)	77 (63%)
Randomization described and appropriate	12 (10%)	34 (28%)

Quality Assessment across Study Design

- an overall Jadad mean score of 2.72
- The Jadad mean score
 - Conventional: 3.21 ± 0.90
 - CAM: 2.23 ± 1.1
 - $P < 0.0005$

Table 3. Number of Studies with Positive Effects ($P < 0.05$) Meeting Specific Quality Criteria

	Quality Scores Based on JADAD			Double Blinding			Randomization Description			Double-Blinding and Randomization Description		
	≥ 3	< 3	P-Val	Yes	No	P-Val	Yes	No	P-Val	Y	N	P-Val
Conventional Therapies	82/97 (85%)	19/23 (83%)	0.820	90/108 (83%)	11/12 (92%)	0.453	10/12 (83%)	91/108 (84%)	0.934	9/11 (82%)	10/11 (91%)	0.534
CAM Therapies	21/38 (55%)	69/83 (83%)	0.002	12/22 (55%)	77/99 (78%)	0.022	20/34 (59%)	70/87 (80%)	0.018	6/12 (50%)	65/79 (82%)	0.012
P-Value of Conventional vs. CAM Therapies	0.0001	0.977		0.003	0.274		0.125	0.413		0.110	0.472	

Conclusions

- Studies of conventional treatments scored **higher on reporting quality** than studies of CAM approaches.
- possible that these differences may reflect distinctions
 - methodologic integrity
 - therapeutic paradigm
 - bias(es) in the approach(es) used to evaluate certain types of therapies

Appraisal (嚴格評讀)

對找到的文章
進行critical appraisal

證據等級(針對PubMed這篇)

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

Grades of Recommendation

A	consistent level 1 studies
B	consistent level 2 or 3 studies <i>or</i> extrapolations from level 1 studies
C	level 4 studies <i>or</i> extrapolations from level 2 or 3 studies
D	level 5 evidence <i>or</i> troublingly inconsistent or inconclusive studies of any level

使用 work sheet 嚴格評 讀

*SYSTEMATIC REVIEW
WORKSHEET*

- Are the results of this systematic review of therapy valid?
- Is it a systematic review of randomised trials of the treatment you're interested in? **Yes**
- Does it include a methods section that describes:
 - finding and including all the relevant trials? **Yes**
 - assessing their individual validity? **No**
- Were the results consistent from study to study? **No**

- Can you apply this valid, important evidence from a systematic review in caring for your patient?
 - Do these results apply to your patient? **In some point**
 - Are your patient's values and preferences satisfied by the regimen and its consequences? **In some point**

Apply

結合醫學倫理方法

將study的結果應用在病人身上

醫療現況

根據各種文獻的統計，原發性頭痛有很多種治療方式，因此還是先以有實證醫學之治療方法較有根據。

病人意願

病人願意先以有科學證據之藥物治療來處理臨床問題。

生活品質

不管何種治療，還是先以改善患者之臨床問題為主要，因此藥物會較快發揮效果來達到生活品質之改善。

社會脈絡

雖然藥物治療通常可以有效發揮療效，但一般民眾仍會有藥物副作用之疑慮，反之傳統療法則會被認為較為自然，較無身體之傷害，因此目前社會還是較有這種傳統觀念。

Audit (自我評估)

在「提出臨床問題」方面的自我評估

- 我提出的問題是否具有臨床重要性？尚可，可應用於門診常見之頭痛處置。
- 我是否明確的陳述了我的問題？
 - 我的foreground question 是否可以清楚的寫成PICO？可以
 - 我的background question是否包括what, when, how, who等字根？有
- 我是否清楚的知道自己問題的定位？（亦即可以定位自己的問題是屬於診斷上的、治療上的、預後上的或流行病學上的），並據以提出問題？知道，屬於治療範疇
- 對於無法立刻回答的問題，我是否有任何方式將問題紀錄起來以備將來有空時再找答案？有時候可以

在「搜尋最佳證據」方面的自我評估

- 我是否已盡全力搜尋？**是**
- 我是否知道我的問題的最佳證據來源？**是**
- 我是否從大量的資料庫來搜尋答案？**是**
- 我工作環境的軟硬體設備是否能支援我在遇到問題時進行立即的搜尋？**是，圖書館的資源使用起來非常便利**
- 我是否在搜尋上愈來愈熟練了？**是，不過仍需繼續練習**
- 我會使用「斷字」、布林邏輯、同義詞、MeSH term，限制 (limiters) 等方法來搜尋？**會**
- 我的搜尋比起圖書館人員或其他對於提供病人最新最好醫療有熱情的同事如何？**還需持續努力**

關於「嚴格評讀文獻」方面的自我評估

- 我是否盡全力做評讀了？是
- 我是否了解Number need to treat 的意義？了解
- 我是否了解Likelihood Ratios的意義？了解
- 我是否了解worksheet每一項的意義？盡量
- 評讀後，我是否做出了結論？大致上是

關於「應用到病人身上」的自我評估

- 我是否將搜尋到的最佳證據應用到我的臨床工作中？**是**
- 我是否能將搜尋到的結論如NNT, LR用病人聽得懂的方式解釋給病人聽？**大致上可以**
- 當搜尋到的最佳證據與實際臨床作為不同時，我如何解釋？**目前研究仍未完全定論，仍需繼續收集更多證據**

改變「醫療行為」的自我評估

- 當最佳證據顯示目前臨床策略需改變時，我是否遭遇任何阻止改變的阻力？**無**
- 我是否因此搜尋結果而改變了原來的治療策略？做了那些改變？**沒有改變, 持續給予正規治療，但也不完全否認輔助治療的功效。**

效率評估

- 這篇報告，我總共花了多少時間？ 十幾個小時
- 我是否覺得這個進行實證醫學的過程是值得的？ 是
- 我還有那些問題或建議？ 對於EBM之應用仍須持續練習與學習

Thanks for your
attention ~ ~