EBM presentation

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Clinical Scenario

CC. Suddent onset of progressive lower abdominal pain since this afternoon (98.10.15)

PI. This 23 y/o male pt was well-being before except smoking habits (2 packages / week). This time he suffered from progressive lower abdominal pain in the afternoon on 98.10.15.. He did not come to our hospital for help until he cound not tolerate the abdominal pain. After coming to our emergent department, paraumbilical and RLQ pain were found in turn. Soonly, acute appendicitis was diagnosed by the surgeon. After finishing the informed consent of the anesthesia and the operation, he was sent to the operation theater for emergent operation.

PH.Denied systemic disease, smoking 2 packages per week
Allergy. Nerver happened before

In the OR, the general anesthesia was performed with oral endotracheal tube.

PICO

P

Adult with oral endotracheal tube intuation

I

Systemic steroid for prophylaxis of post extubation laryngeal edema

C

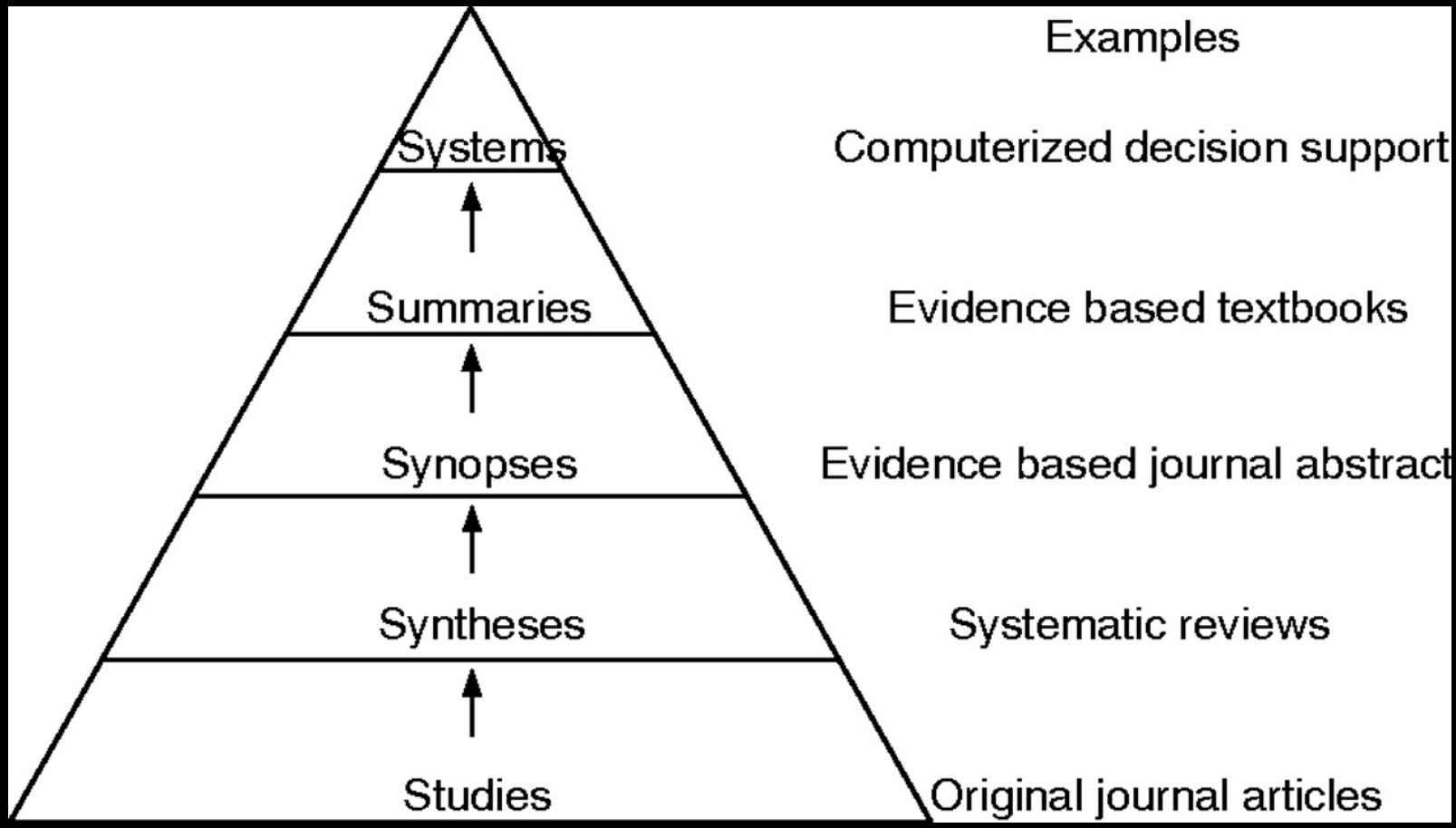
Steroid compared with placebo (non-steroid usage)

O

Possibility for laryngeal edema

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

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



Systems

none

Summaries

UpToDate, DynaMed,, BMJ Clinical Evidence

Synopses

ACP journal club

Syntheses

Cochrane Library

Studies

PubMed, Google

Search

Key Words

Laryngeal edema, steroid, glucocorticoid, extubation, post extubation

Data Base

UpToDate, DynaMed, ACP journal Club and Cochrane Library

Search from UpToDate

- Endotracheal tube management and complications
- Extubation management
- Epiglottitis (supraglottitis): Treatment and prevention
- Approach to adults with steroid-refractory and steroid-dependent ulcerative colitis
- Treatment of nausea and vomiting of pregnancy (hyperemesis gravidarum and morning sickness)
- Postnatal use of glucocorticoids in bronchopulmonary dysplasia
- Talc pleurodesis
- Sedation or induction agents for rapid sequence intubation in adults
- Treatment and complications of respiratory distress syndrome in preterm infants
- Rapid sequence intubation in children
- Prevention of respiratory distress syndrome in preterm infants
- Corticosteroid therapy in septic shock
- Intensive care unit management of acute severe asthma exacerbation in children
- Tonsillectomy in adults: Surgery
- Spinal cord infarction: Prognosis and treatment
- Cystic fibrosis: Nutritional issues

UpToDate

There are conflicting data regarding the effectiveness of glucocorticoid therapy at preventing post-extubation stridor.

Trials that enrolled patients at increased risk for post-extubation stridor and administered multiple doses of glucocorticoids prior to extubation found a statistically significant reduction in the rates of post-extubation stridor and reintubation.

UpToDate

In contrast, trials that enrolled unselected patients or administered a single dose of glucocorticoids shortly prior to extubation did not find statistically significant improvement in the same outcomes.

UpToDate

Meta-analyses that evaluated the efficacy of glucocorticoid therapy in the prevention of postextubation upper airway obstruction have also reported different results.

UpToDate

In a meta-analysis of five randomized trials (1873 patients), patients who received glucocorticoid therapy had a nonstatistically significant reduction in the rates of postextubation stridor (relative risk 0.49, 95% CI 0.20-1.19) and reintubation (relative risk 0.47, 95% CI 0.16-1.39) [24].

UpToDate

- We prefer to limit glucocorticoid therapy to those patients who have a reduced cuff leak, since the overall incidence of postextubation laryngeal edema requiring reintubation is low (less than 5 percent).
- We believe this approach focuses therapy on those who are most likely to benefit and avoids unnecessarily prolonging mechanical ventilation for glucocorticoid therapy.

Search from DynaMed

- Laryngeal edema
  - none
- Extubation
  - none
- Laryngeal edema AND intubation
  - none
- Extubation AND steroid
  - none
- Extubation AND Laryngeal edema
  - none

Search from ACP journal Club

Search Help

Found 3 matches. Showing 1 - 3.

1. 2007 - Methylprednisolone reduced postextubation laryngeal edema in adults with tracheal intubation

2. OAN: 2006 - The cuff-leak test is a simple tool to verify severe laryngeal edema in patients undergoing long-term mechanical ventilation.

3. 2000 - Subsequent reactions were common and often more serious than were the initial reactions of children with peanut allergy

ACP journal club

Conclusion

In adults with tracheal intubation, 12-hour pretreatment with methylprednisolone was more effective than placebo for preventing postextubation laryngeal edema.

The Cochrane Library

Evidence for healthcare decision-making

Record Information

Restrict t

- **Corticosteroids for the prevention and treatment of post-extubation stridor in neonates, children and adults**
  Robinder G Khemani, Adrienne Randolph, Barry Markovitz
  Year: 2009
  Record **Review**

- **Antibiotics for acute laryngitis in adults**
  Ludovic Reveiz, Andr唐 Felipe Cardona, Edgar Guillermo Ospina
  Year: 2007
  Record **Review**

- **Intravenous dexamethasone for extubation of newborn infants**
  Peter G Davis, David J Henderson-Smart
  Year: 2001
  Record **Review**

- **Glucocorticoids for the treatment of anaphylaxis**
  Karen Jui Lin Choo, F Estelle R Simons, Aziz Sheikh
  Year: 2009
  Record **Protocol**

Select All (to export citations)

Export Selected Citations | Export All Results

Appraisal

Oxford Centre for Evidence-based Medicine Levels of Evidence (May 2001)

Level	Therapy/Prevention, Aetiology/Harm	Prognosis	Diagnosis	Differential diagnosis/symptom prevalence study	Economic and decision analyses
1a	SR (with homogeneity*) of RCTs	SR (with homogeneity*) of inception cohort studies; CDR† validated in different populations	SR (with homogeneity*) of Level 1 diagnostic studies; CDR† with 1b studies from different clinical centres	SR (with homogeneity*) of prospective cohort studies	SR (with homogeneity*) of Level 1 economic studies
1b	Individual RCT (with narrow Confidence Interval‡)	Individual inception cohort study with ≥ 80% follow-up; CDR† validated in a single population	Validating** cohort study with good††† reference standards; or CDR† tested within one clinical centre	Prospective cohort study with good follow-up****	Analysis based on clinically sensible costs or alternatives; systematic review(s) of the evidence; and including multi-way sensitivity analyses
1c	All or none§	All or none case-series	Absolute SpPins and SnNouts††	All or none case-series	Absolute better-value or worse-value analyses ††††
2a	SR (with homogeneity*) of cohort studies	SR (with homogeneity*) of either retrospective cohort studies or untreated control groups in RCTs	SR (with homogeneity*) of Level >2 diagnostic studies	SR (with homogeneity*) of 2b and better studies	SR (with homogeneity*) of Level >2 economic studies
2b	Individual cohort study (including low quality RCT; e.g., <80% follow-up)	Retrospective cohort study or follow-up of untreated control patients in an RCT; Derivation of CDR† or validated on split-sample§§§ only	Exploratory** cohort study with good†††reference standards; CDR† after derivation, or validated only on split-sample§§§ or databases	Retrospective cohort study, or poor follow-up	Analysis based on clinically sensible costs or alternatives; limited review(s) of the evidence, or single studies; and including multi-way sensitivity analyses
2c	"Outcomes" Research; Ecological studies	"Outcomes" Research		Ecological studies	Audit or outcomes research
3a	SR (with homogeneity*) of case-control studies		SR (with homogeneity*) of 3b and better studies	SR (with homogeneity*) of 3b and better studies	SR (with homogeneity*) of 3b and better studies
3b	Individual Case-Control Study		Non-consecutive study; or without consistently applied reference standards	Non-consecutive cohort study, or very limited population	Analysis based on limited alternatives or costs, poor quality estimates of data, but including sensitivity analyses incorporating clinically sensible variations.
4	Case-series (and poor quality cohort and case-control studies§§)	Case-series (and poor quality prognostic cohort studies***)	Case-control study, poor or non-independent reference standard	Case-series or superseded reference standards	Analysis with no sensitivity analysis
5	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on economic theory or "first principles"

Produced by Bob Phillips, Chris Ball, Dave Sackett, Doug Badenoch, Sharon Straus, Brian Haynes, Martin Dawes since November 1998.

所取樣本是否有臨床代表性，是否與我的病人差不多?	只有部份相似
分組是否有隨機盲法分組	有隨機 ，但無blind
對照組和實驗組進入實驗時是否相似?	是
是否病人都被放在原來的組別中做分析?	是
是否醫師和病人對治療都不知情?	無double blind
失去追蹤個案數是否過多？5/20% rule	無

I是否清楚描述並且是可行的	是
C是否清楚描述並且是可行的	是

是否選用客觀的測量結果	是
是否使用盲法(測量者與受試皆不知受試者被分在那一組)	只有單盲

測量結果的時間點是否合乎邏輯	是
追蹤是否夠久	未確切說明

Should these valid, potentially important results of a critical appraisal about a harmful treatment change the treatment of your patient?

Can the study results be extrapolated to your patient?	不全然
What are your patient's preferences, concerns and expectations from this treatment?(病人的期望、喜好、關心)	病人期望發生越少併發症越好
What alternative treatments are available?	無其他確切方法

結合醫學倫理方法

將**study**的結果應用在病人身上

醫療現況

多半是插管後依照插管的過程評估是否需要使用拔管前的類固醇藥物

病人意願

患者只求接受最好的治療

生活品質

若發生laryngeal edema可能危害道上呼吸道，有生命的威脅；嚴重可能還需要進行外科氣切，會影響外觀及生活品質。

社會脈絡

沒有給付或金錢的問題，也無涉及道德倫理的問題

自我評估　　Audit

- 我提出的問題是否具有臨床重要性？是，可以作為治療參考。
- 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
  - 我的background question是否包括what, when, how, who等字根？有，但未全能括
- 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，屬於預後範疇
- 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

- 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，學校買的版權資源非常便利
- 我是否在搜尋上愈來愈熟練了？是
- 我會使用「斷字」、布林邏輯、同義詞、MeSH term，限制(limiters)等方法來搜尋？
- 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？差不多

- 我是否盡全力做評讀了？盡力而為
- 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？了解
- 評讀後，我是否做出了結論？是

- 我是否將搜尋到的最佳證據應用到我的臨床工作中？可
- 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？應該可以
- 當搜尋到的最佳證據與實際臨床作為不同時，我如何解釋？　尊重主負責之主治醫師之醫囑

- 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？沒有；但基本上，治療策略需要改變的時候，一定要與主治醫師討論，是一種基本的尊重和倫理或可當作是醫療上的互相砥礪，使我們的醫療行為更進步。

- 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

- 這篇報告，我總共花了多少時間？6個小時，時間多半花在材料上的選用。
- 我是否覺得這個進行實證醫學的過程是值得的？值得，醫學再也不是單方面自己的力量，因為個人知識的索取，有時光、腦力的限制。但因為EBM以及網際網路的出現，使得醫療是全世界連結一起的，就好像全世界的專家一起診治病人一般。
- 我還有那些問題或建議？評讀paper的方法尚未純熟

Thank you for your attention