

肝膽內科實證醫學 病例討論報告

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97/9/29

clinical scenario

病人基本資料及主訴

- 蔡@鏘 39 y/o male
- A case of 1.) HBV carrier, 2.) hypertriglycemia, 3.) hypercholesterol 4.) alcoholism.
- Epigastralgia for a long time. Until one week ago, he had progressive and frequent abdominal pain, radiation to back(+). Diarrhea(+), Fever(+), dyspnea(+).
- He visited KCGMH and acute pancreatitis was impressed.
- He was transferred to 民生hospital. At there, he had EGD survey and reported multiple gastric ulcer and hemorrhagic gastritis.

- Abdominal CT revealed that acute pancreatitis with multiple necrosis, grade E.
- CXR: bilateral pleural effusion
- Abdomen echo done again showed
 - 1.) fatty liver
 - 2.) swelling of pancreas with pseudocysts,
 - 3.) ascites,
 - 4.) pleural effusion.
- Amylase: 897, lipase:1618.
- Transferred to our ER

Clinical scenario 診断

- Necrotizing acute pancreatitis
 - Ranson score > 6 points
- HBV carrier
- Hypertriglycemia
- Hypercholesterolemia
- Alcoholism.

clinical scenario

治療方式及對治療的反應

- Rx: Cefmetazole was administered and NPO with adequate hydration at least for 14 days.
- Abdominal pain, fever and dyspnea
⇒ gradually subside
- WBC:13.0 (9/15) => 7.8 (9/22)
- Amylase/Lipase: 897/1618 (9/10) => 59/91 (9/18)
- CRP: 165.36 (9/15) => 65.5 (9/24)
- Complications: DIC(+), ARDS(-)

clinical scenario 治療計畫

- Keep NPO until improvement of abdominal pain.

Asking (提出臨床問題) background questions

- Q1: How to diagnose Acute pancreatitis ?
- Q2: Who often gets Acute pancreatitis ?
- Q3: How to treat the Acute pancreatitis ?

搜尋 Summaries

- Key word: Acute pancreatitis
- 資料出處：UpToDate



- 標題: Clinical manifestations and diagnosis of acute pancreatitis
- 標題: Treatment of acute pancreatitis
- 作者: Santhi Swaroop Vege, MD
Suresh T Chari, MD

Q1: How to **diagnose** acute pancreatitis ?

- The diagnosis of acute pancreatitis
 - Clinical manifestations: acute upper abdominal pain
 - Lab data: Serum amylase and lipase
 - Radiology:
 - Abdominal plain film: " Sentinel loop" or "colon cutoff sign"
 - Chest film: Elevation of a hemidiaphragm, pleural effusions, or acute respiratory distress syndrome
 - CT scan: assessment of complications and severity (five grades)

Q2: **Who** often gets acute pancreatitis ?

- Etiology: Gallstones and alcoholism
- Demographic:
 - Gallstones/woman and alcoholism/man
- The incidence of acute pancreatitis increases with age.
- Onset in the first decade: hereditary hyperlipidemia or hereditary chronic pancreatitis, infection, or trauma.

Q3: How to treat the acute pancreatitis ?

- The treatment based on:
 - Edematous or necrotizing.
- Goal: correcting predisposing factors
- Rx:
 - Pain control
 - intravenous fluids
 - nothing by mouth

Q3: How to treat the **necrotizing** acute pancreatitis ?

- ICU: monitors and supports pulmonary, renal, circulatory, and hepatobiliary function.
- Sufficient fluid resuscitation
- 1/3 of patients with pancreatic necrosis develop infected necrosis: Prophylactic systemic antibiotics
- Jejunal feeding

Apply到我的病人身上

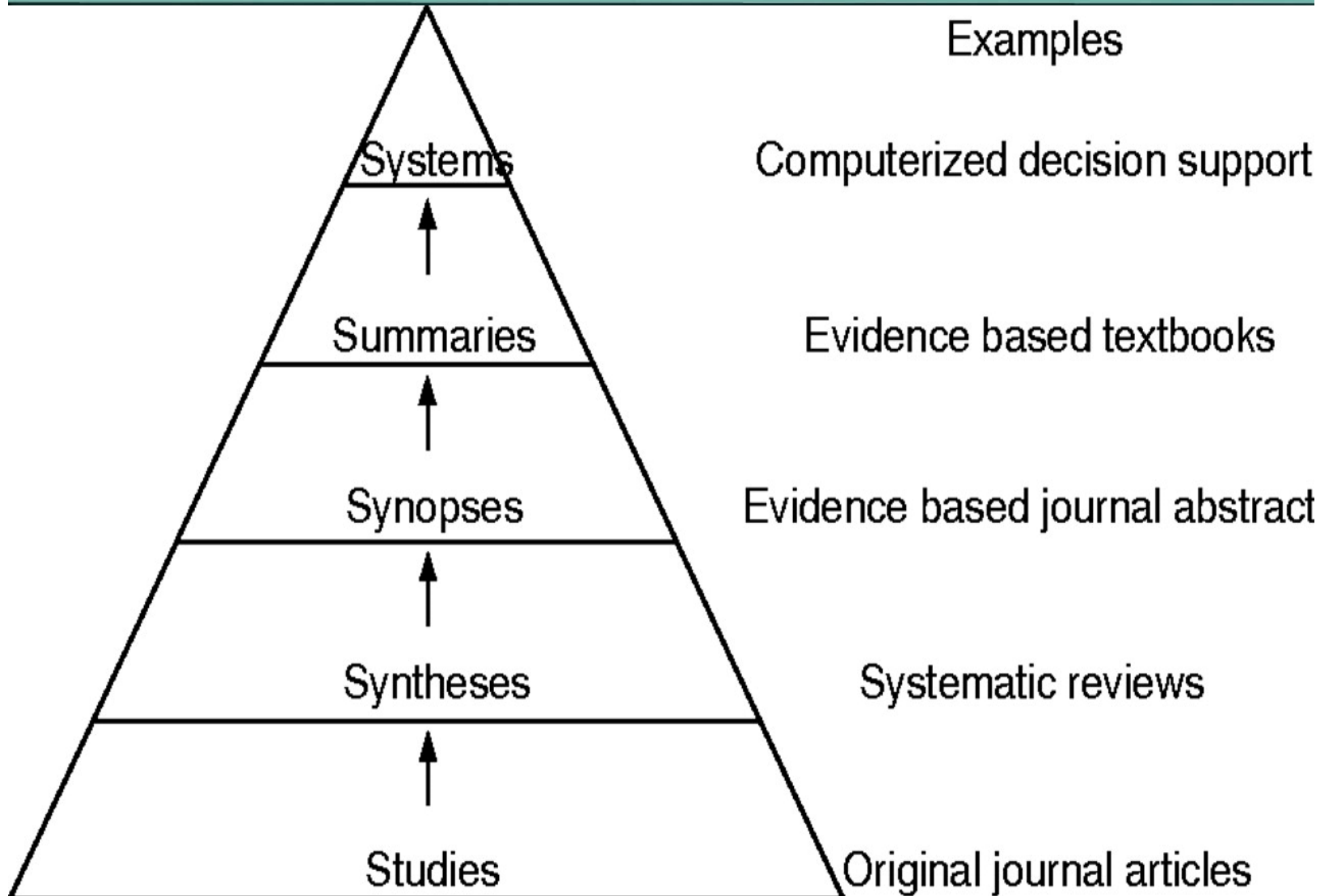
- Necrotizing acute pancreatitis.
- Goal: to cease alcohol intake.
- Rx: Pain control, intravenous fluids, and nothing by mouth.
- Monitors pulmonary, renal, circulatory, and hepatobiliary function.
- Prophylactic systemic antibiotics

提出 Foreground questions

- Enteral nutrition (EN) or parenteral nutrition (PN) can provides adequate supply of nutrients to ensure optimum recovery?

P	Acute pancreatitis
I	Parenteral nutrition (PN)
C	Enteral nutrition (EN)
O	Mortality, morbidity and length of hospital stay
T	Not defined

Examples



搜尋 Summaries

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- 標題: Treatment of acute pancreatitis
- 作者: Santhi Swaroop Vege, MD
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- Nutritional support is required in patients with severe pancreatitis.
- An ileus and abdominal pain, and stimulating the pancreas with enteral feeding => Typically fed parenterally
- Maintain the intestinal barrier => benefit of enteral nutrition

- Enteral feeding via **nasojejunal tube**
 - use high protein, low fat preparations
- Oral feeding is frequently not tolerated due to postprandial pain, nausea, or vomiting

將summary應用到我的病人

- 病人在一開始診斷為severe pancreatitis就已經開始NPO，入本院後，持續NPO加上IV Fluids。
- 滿兩週的NPO，因為疼痛發作漸緩，檢驗數據改善，已經開始試喝開水。

搜尋 Synopsis

- Key word: Acute pancreatitis
- 資料出處: British Medical Journal



- 標題: **Meta-analysis of parenteral nutrition versus enteral nutrition in patients with acute pancreatitis.**
- 作者: Paul E Marik and Gary P Zaloga
- 時間: 2 Jun, 2004

Appraisal

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 <i>or</i> inconclusive studies of any level

aaPICOT

- **a:** Does this paper answer your question?
Yes.
- **a:** Is the author an expert of the field?
Yes

PICOT

- Six studies with 263 patients with acute pancreatitis. (1997-2003)
- admitted by characterised abdominal pain with raised serum amylase and lipase activity.
- APACHE II (acute physiology and chronic health evaluation) score, Ranson score, or Glasgow score to quantify the severity of pancreatitis

Table 1 Demographic data of studies included in meta-analysis. Figures are for enteral nutrition/total parenteral nutrition, and scores are given as means (SDs)

	No of patients	Ranson criteria	Glasgow score	APACHE II	Siting of nasojejunal tube
McClave, 1997 ²⁸	16/16	1.3 (0.35)/1.3 (0.35)	—	—	Endoscopic
Windsor, 1998 ²⁹	16/18	—	2/2	8/9.5	Fluoroscopic*
Kalfarentzos, 1997 ³⁰	18/20	—	4.2 (0.9)/4.6 (1.1)	12.7 (2.6)/11.8 (1.9)	Fluoroscopic
Abou-Assi, 2002 ¹⁹	26/27	3.1 (0.5)/2.5 (0.4)	—	—	Fluoroscopic/ endoscopic
Olah, 2002 ¹⁸	41/48	—	2.6 (1.2)/2.4 (1.6)	—	Fluoroscopic
Gupta, 2003 ³¹	8/9	—	—	8/10	Blind†

*Patients with mild disease (Glasgow score <3) received oral nutrition.

†“Blind bedside technique.”

Potentially relevant trials identified and screened for retrieval (n=117)

Not randomised controlled trials (n=104)

Trials retrieved for more detailed evaluation (n=13)

Excluded (n=4)
TPN v fluids (n=1)
ENT v fluids (n=2)
TPN v ENT + PN (n=1)

Potentially appropriate trials to be included in meta-analysis (n=9)

Excluded (n=3)
end points of interest not studied/reported

Trials included in meta-analysis (n=6)

- Randomized? **Yes.**
- Representative? **Yes.**
- Ethical approval: **Not required.**

Table 3 Jadad quality score of trials included in meta-analysis²⁴

	Year	Randomisation method	Blinding	Withdrawals/drop outs accounted for	Jadad score
McClave, 1997 ²⁸	1997	Not stated	None	Yes	2
Windsor, 1998 ²⁹	1998	Odd/even hospital number	None	Yes	1
Kalfarentzos, 1997 ³⁰	1997	Sealed numbered envelopes	None	Yes	3
Abou-Assi, 2002 ¹⁹	2002	Not stated	None	Yes	2
Olah, 2002 ¹⁸	2002	Birth date	None	Yes	1
Gupta, 2003 ³¹	2003	Sealed numbered envelopes	None	Yes	3

PICOT

- Enteral nutrition via a nasojejunal tube placed endoscopically or radiographically.
- Initiated within 48 hours of admission (3 studies) / 48 hour enrolment period followed by the nutritional support period. (2 studies)

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- Parenteral nutrition

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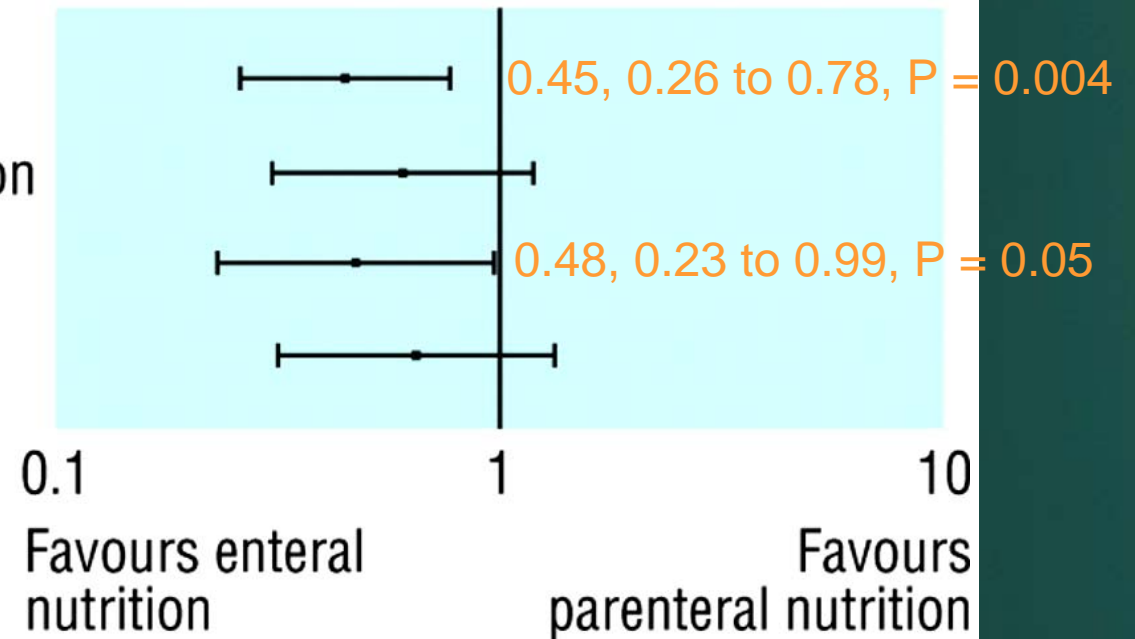
- Primary outcome: *Infections* (mortality of up to 80%)
- Secondary outcome:
 - *Surgical intervention*
 - Complications other than infection:
 - Adult respiratory distress syndrome, multi-organ failure, acute pseudocysts, and pancreatic fistula.
 - *Length of hospital stay* (mean reduction of 2.9 days, 1.6 days to 4.3 days; $P < 0.001$)
 - Mortality

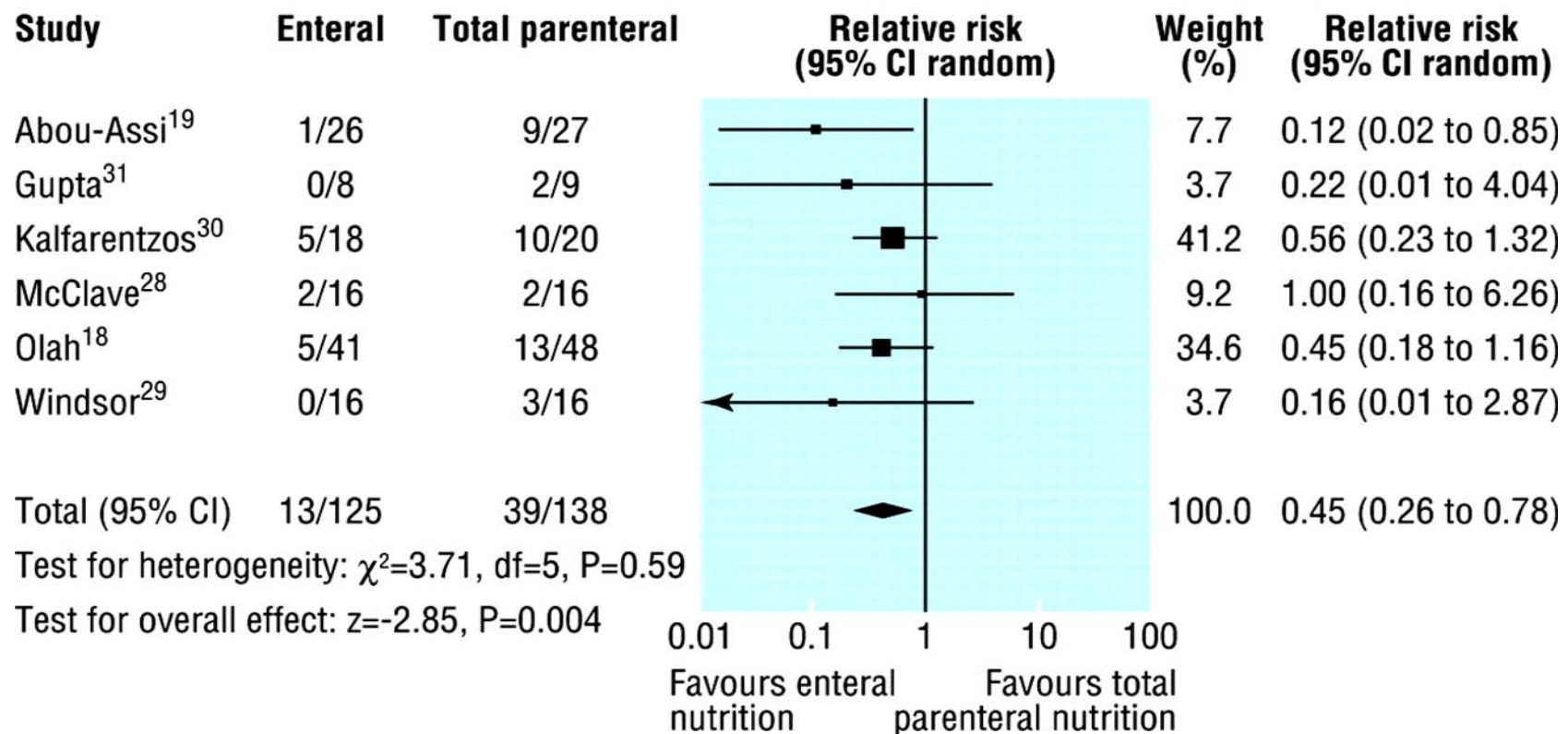
Infection

Complications other than infection

Surgical interventions

Mortality





- Double blind? **No.**
 - Physicians used different treatment according to patients' condition.
 - Patients knew about the way they're treated?
- Objective measurement? **Yes.**
 - Radiology, lab, physiological variables, age.
 - APACHE II score, Ranson score, or Glasgow score

PICOT

- Remission was only observed within hospitalized days
- Is the duration long enough? **Unkown**

使用 work sheet 嚴格評讀

Are the results of this harm study valid?

Were there clearly defined groups of patients, similar in all important ways other than exposure to the treatment or other cause?

Yes, there were.

Were treatment exposures and clinical outcomes measured the same ways in both groups (e.g., was the assessment of outcomes either objective (e.g., death) or blinded to exposure)?

Yes, they were.

Was the follow-up of study patients complete and long enough? (有沒有人跑掉?)

No, it was not.

Are the results of this single preventive or therapeutic trial valid?

Was the assignment of patients to treatments randomised?
-and was the randomisation list concealed?

Not all of them

Were all patients who entered the trial accounted for at its conclusion? -and were they analysed in the groups to which they were randomised?

Yes.

Were patients and clinicians kept “blind” to which treatment was being received?

No.

Aside from the experimental treatment, were the groups treated equally?

Not stated.

Were the groups similar at the start of the trial?

No.

Treatment of acute pancreatitis		Relative Risk Reduction RRR	Absolute Risk Reduction ARR	Number Needed to Treat NNH
CER Parenteral nutrition	EER Enteral nutrition	$\frac{EER - CER}{CER}$	EER - CER	1/ARR
39/125 =31.2%	13/138 =9.4%	69.87 %	21.8%	4.59

Can you apply this valid, important evidence about a treatment in caring for your patient?

Do these results apply to your patient?

No, it does not.

Is your patient so different from those in the trial that its results can't help you?

No, he's not.

How great would the potential benefit of therapy actually be for your individual patient?

Yes, a lot

Are your patient's values and preferences satisfied by the regimen and its consequences?

He prefer oral food taking. Recovery slowly.

Do your patient and you have a clear assessment of their values and preferences?

Yes, we do.

Are they met by this regimen and its consequences?

Not available

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?

Yes, it can.

What are your patient's preferences, concerns and expectations from this treatment?(病人的期望、喜好、關心)

He hoped improvement of abd pain and shortness of hospital stay.

What alternative treatments are available?

**Intravenous fluids alone
ENT + PN**

Apply

醫療現況	病人意願
<p>NPO+Fluids or TPN為主要療法，尤其對於輕微胰臟炎效果也比較明確。但最好的進食起始時間仍未定。從期刊資料得知EN似乎是比較好的支持性療法。</p>	<p>患者希望病情能夠早點控制，減少疼痛，縮短住院日。 放置一條鼻空腸管，對病人來說比較不舒服，除非是很嚴重的情況而且效果明確，才會有意願。</p>
生活品質	社會脈絡
<p>禁食一週以上，加上大多是嚴重急性胰臟炎，病人體力虛弱。</p>	<p>縮短住院天數及減少併發症為健保評估醫療品質的指標。</p>

總結與討論

- 診斷正確是治療的根本，使用臨床診斷標準，分類出嚴重的胰臟炎。
- 根據現有資料，空腸進食是一個安全有效的營養方式，裝置鼻空腸管需要透過內視鏡或影像輔助，最好是在診斷出急性胰臟炎後盡快置放。
- 此篇報告是繞過胃的腸胃進食，而非直接經口進食，雖然少數報告開始覺得鼻胃管的效果似乎差不多。

Audit - 提出臨床問題

- 我提出的問題是否具有臨床重要性？有，使用營養的方式對胰臟炎的病患是重要的
- 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
- 我是否清楚的知道自己問題的定位？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

Audit - 搜尋最佳證據

- 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

Audit - 嚴格評讀文獻

- 我是否盡全力做評讀了？**應該是吧**
- 我是否了解Number need to treat 的意義？**了解**
- 我是否了解worksheet每一項的意義？**多數了解**
- 評讀後，我是否做出了結論？**是**

Audit - 應用到病人身上

- 是否將搜尋到的最佳證據應用到我的臨床工作中？目前無
- 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？無
- 當搜尋到的最佳證據與實際臨床作為不同時，我如何解釋？目前證據有限加上考慮做鼻空腸管置放的問題，依舊維持現有治療

Audit - 醫療行為

- 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？

有，考量鼻空腸管置放的不適跟效果，除非是必要，在跟病人的溝通上會比較容易

- 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？有改變，已開始讓病試著經口進食



Thank you!

Schlossberg **Graz**