BEST EVIDENCE TOPIC REPORTS

Towards evidence based emergency medicine: best BETs from the Manchester Royal Infirmary

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Best evidence topic reports (BETs) summarise the evidence pertaining to particular clinical questions. They are not systematic reviews, but rather contain the best (highest level) evidence that can be practically obtained by busy practising clinicians. The search strategies used to find the best evidence are reported in detail in order to allow clinicians to update searches whenever necessary. Each BET is based on a clinical scenario and ends with a clinical bottom line which indicates, in the light of the evidence found, what the reporting clinician would do if faced with the same scenario again.

The BETs published below were first reported at the Critical Appraisal Journal Club at the Manchester Royal Infirmary¹ or placed on the BestBETs website. Each BET has been constructed in the four stages that have been described elsewhere.² The BETs shown here together with those published previously and those currently under construction can be seen at <http://www.bestbets.org>.³ Four BETs are included in this issue of the journal.

- ▶ Use of intravenous cyclizine in cardiac chest pain
- ▶ Rapid sequence induction in the emergency department by emergency medicine personnel
- ▶ Absorbable sutures in paediatric lacerations
- ▶ Smectite for acute diarrhoea in children

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1 Carley SD, Mackway-Jones K, Jones A, et al. Moving towards evidence based emergency medicine: use of a structured critical appraisal journal club. *J Accid Emerg Med* 1998;15:220–2.

2 Mackway-Jones K, Carley SD, Morton RJ, et al. The best evidence topic report: a modified CAT for summarising the available evidence in emergency medicine. *J Accid Emerg Med* 1998;15:222–6.

3 Mackway-Jones K, Carley SD. [bestbets.org](http://www.bestbets.org): odds on favourite for evidence in emergency medicine reaches the worldwide web. *J Accid Emerg Med* 2000;17:235–6.

Use of intravenous cyclizine in cardiac chest pain

Report by Gabby May, *Clinical Fellow*
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Abstract

A short cut review was carried out to establish whether cyclizine adversely affected haemodynamic parameters in patients with cardiac disease. A total of 70 papers were found of which one presented the best evidence to answer the clinical question. The author, date and country of publication, patient group studied, study type, relevant outcomes, results, and study weaknesses of this best paper are tabulated. The

clinical bottom line is that cyclizine should be avoided in patients with acute coronary events.

Three part question

[In patients with symptoms compatible with myocardial ischaemia] is [the use of intravenous cyclizine] associated with [increased myocardial work, morbidity, or mortality]?

Clinical scenario

A 52 year old man presents to the emergency department with a history suggestive of myocardial ischaemia. He requires intravenous opioids for pain and is feeling nauseous so you decide to give him an intravenous antiemetic. However, your consultant tells you not to use cyclizine as it can increase the heart rate, and thus myocardial oxygen demand, in already ischaemic muscle. You wonder whether this is true, or just more evidence of his eccentricity?

Search strategy

Medline 1966–Week 1, September 2005, using the OVID interface: [{exp Myocardial Infarction/or MI.mp or myocardial infarction.mp. or exp Myocardial Infarction/or exp Coronary Disease/or heart attack.mp or chest pain.mp. or exp Chest Pain/or angina.mp. or exp Angina Pectoris/or acute coronary syndrome.mp. or exp Angina, Unstable/or exp Myocardial Ischemia/or myocardial ischaemia.mp. or myocardial ischemia.mp. or ACS.mp. or exp Coronary Thrombosis/or exp Coronary Disease/or acute coronary\$.mp.} AND {cyclizine.mp. or exp CYCLIZINE/or valoid.mp. or antihistamine.mp. or exp Histamine H1 Antagonists/or antihistamine\$.mp.}] Limit to humans and English language; *Cochrane Database of Systematic Reviews* and the Cochrane Central Register of Controlled Trials: [cyclizine]

Search outcome

Medline: 70 articles found of which one was relevant to the three part question (table 1). Cochrane: 66 citations. No new papers found.

Comment(s)

Although intravenous cyclizine is used regularly as an antiemetic in patients with cardiac chest pain concerns have been expressed about its potential effects on myocardial work/ischaemia. This well controlled but small study demonstrated significant changes in haemodynamic parameters with cyclizine, which appeared to be independent of the effects of diamorphine. In theory, raised vent filling pressures and an increase in afterload described in this study and confirmed by a reduction in cardiac output could lead to reduction of coronary artery flow and increase in myocardial oxygen consumption.

The major limitation of this study is the patient group studied and whether the results can be translated to the emergency department patient. In addition the effects of other antiemetics have not been studied so no comparative