BEST EVIDENCE TOPIC REPORTS

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

Edited by K Mackway-Jones

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.

The BETs published below were first reported at the Critical Appraisal Journal Club at the Manchester Royal Infirmary.¹ Each BET has been constructed in the four stages that have been described elsewhere.² The four topics are covered in this issue of the journal are:

- Antibiotics and corneal abrasion
- Lignocaine or bupivacaine for digital ring block
- Steroids in lateral epicondylitis
- Management of fractures of the neck of the fifth metacarpal

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.

Antibiotics and corneal abrasion

Report by Wendy Dollery, *Senior Registrar*
Search checked by Rosemary Morton, *Consultant*

Clinical scenario

A 18 year old metal worker presents with a foreign body sensation in his right eye. A corneal foreign body is present and is removed. There is an abrasion to the cornea.

Three part question

In [an adult with a corneal abrasion after removal of a corneal foreign body] does [topical antibiotic therapy] reduce the [time to healing]?

Search strategy

Medline 1966 to 4/98 using the OVID interface. ({[exp eye injuries OR exp eye foreign bodies OR corneal abrasion\$.ti,ab,sh] AND [exp antibiotics OR antibiotic\$.ti,ab,sh] AND [maximally sensitive RCT filter]} LIMIT to [english AND human]).

Search outcome

Forty eight papers found of which 47 were irrelevant; the remaining paper is shown in table 1.

Comment

There appears to be no evidence based reason to give topical antibiotics routinely to patients with corneal abrasions. It has been said that there is an increase in the incidence of corneal erosions if antibiotics are not given (but there are no papers to support this assertion). The incidence of corneal erosion after simple traumatic corneal abrasion is very small and the study above is too small to detect a difference in the incidence of this complication.

Clinical bottom line

On current evidence topical antibiotic therapy is not required for corneal abrasions secondary to corneal foreign bodies.

1 Kruger RA, Higgins J, Rashford S, *et al.* Emergency eye injuries. *Aust Fam Physician* 1990;19:934-8.

Table 1

Author, date, and country	Patient group	Study type (level of evidence)	Outcomes	Key results	Study weaknesses
Kruger <i>et al.</i> , 1990, Australia ¹	94 patients with corneal foreign body induced abrasions Antibiotic v placebo	PRCT	Healing time measured by: Symptoms Visual acuity Corneal defect	No difference No difference No difference	Small study of indeterminate power

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PRCT = prospective randomised controlled trial.