BEST EVIDENCE TOPIC REPORTS

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

Edited by K Mackway-Jones

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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 practicing 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.best-bets.org>.³ 4 BETs are included in this issue of the journal.

- Should minor mucosal tongue lacerations be sutured in children?
- Is skin turgor reliable as a means of assessing hydration status in children?
- Is ED-based brief intervention worthwhile in children and adolescents presenting with alcohol-related events?
- Should a child with preseptal periorbital cellulitis be treated with intravenous or oral antibiotics?

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**:220–222.
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**:222–226.
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.

Should minor mucosal tongue lacerations be sutured in children?

Report by Zia Ud-din, Senior House Officer
Maxillofacial Surgery and Musarrat Aslam, Senior
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Search checked by Sobbia Gull, Paediatric Surgical
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A short cut review was carried out to establish whether all lacerations to the tongue in children should be sutured. 575

papers were found using the reported searches, of which 1 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 is tabulated. It is concluded that the evidence is poor, that local advice should be followed and that it is likely that this will be that conservative management with early follow up is acceptable for smaller lacerations.

Clinical scenario

A 3-year-old boy presents to the emergency department after falling from a swing in the playground at school. He sustained a one centimetre non-gaping laceration to dorsal third of his tongue. His parents are very anxious about stitches. You wonder whether any intervention is required.

Three-part question

In [children with mucosal tongue lacerations] is [conservative management as good as suturing] at [producing an acceptable outcome]

Search strategy

Medline 1966–11/2006 using the OVID interface.

[(lacerat\$.mp. OR cut.mp. OR wound.mp. OR trauma.mp. OR injur\$.mp. OR tear\$.mp.) AND (exp tongue OR langue.mp. OR lingual.mp. OR gloss\$.mp.) AND maximally sensitive RCT filter LIMIT to human AND English. Cochrane Library Issue 4 2006 tongue [MeSH descriptor explode all trees] 76 records – 0 relevant

Outcome

Altogether 575 papers were found, of which only one had any relevance.

Comments

No evidence exists to indicate which lacerations should be sutured and which should be managed conservatively. However, there is a general consensus that the main indications for immediate management are uncontrollable haemorrhage, airway compromise and the presence of a significant segment of severed tongue or of a segment at the verge of being severed. It is accepted that minor lacerations of the tongue will heal readily with no impairment of tongue function. There are no PRCTs that address this three part question suggesting that further research is necessary.

► CLINICAL BOTTOM LINE

Local advice should be followed.

Lamell CW, Fraone G, Casamassimo PS, *et al.* Presenting Characteristics and Treatment Outcomes for Tongue Lacerations in Children. *Paediatric Dentistry* 1999;**21**(1):34–8.

Table 1

Author, country, date	Patient group	Study type	Outcomes	Key results	Study weaknesses
Lamell CW <i>et al</i> , 1999, USA	28 patients aged 1–9 with tongue lacerations of which 22 evaluated for result, managed by predetermined selection criteria- 1. Gaping wound at rest 2. Lateral border wounds 3. Active haemorrhage	Observational Study	Difference in quality of result with suturing or not Post-trauma morbidity	No significant difference No significant difference	25% of patients had no follow-up Lack of calibration of clinicians Small sample size

Is skin turgor reliable as a means of assessing hydration status in children?

Report by O Fayomi, Specialist Registrar Accident & Emergency Medicine, Wycombe General Hospital
Search checked by I Maconochie, R Body, Consultant Paediatric Accident & Emergency Medicine; Clinical Research Fellow

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A short cut review was carried out to establish whether skin turgor is a reliable indicator of hydration status in children. 478 papers were found in Medline and 107 in Embase using the reported searches, of which 4 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 three of these papers are tabulated (the fourth is a partial review). It is concluded that skin turgor is only moderately reliable at indicating hydration status in children.

Clinical scenario

A 3-year-old girl is brought to the emergency department with a 2 day history of vomiting and diarrhoea. You wish to estimate

her hydration status to determine whether rehydration therapy is needed and remember being taught that increased skin turgor is associated with dehydration. You wonder how reliable this clinical sign actually is.

Three part question

In [children attending the emergency department with suspected dehydration] [what is the degree of variation between observers] when [performing assessment of skin turgor]

Search strategy

Medline 1966–2006 November Week 3 and Embase 1980–07/04.
 Medline: (turgor.af. OR (clinical sign\$ OR examination).mp. OR exp Physical Examination/) AND (exp Dehydration/OR dehydrat\$.mp. OR exp Hypovolemia/OR (hypovolaem\$ OR hypovolaem\$.mp.) AND (Best BETs Paediatric filter (maximally sensitive)))

Embase: (turgor.af. OR (clinical sign\$ OR examination).mp. OR exp Physical Examination/) AND (exp Dehydration/OR dehydrat\$.mp. OR exp Hypovolemia/OR (hypovolaem\$ OR hypovolaem\$.mp.) limit to Child, Unspecified Age

Search outcome

478 papers were found using Medline and 107 using Embase, three of which were relevant to the topic of interest. One relevant systematic review summarised two of these papers but included no additional papers (Steiner *et al*, 2004).

Table 2

Author, date and country	Patient group	Study type (level of evidence)	Outcomes	Key results	Study weaknesses
Gorelick M, <i>et al</i> , 1997, USA	84 patients, Age (1 month to 5 years)	Prospective cohort study	Level of observer agreement	k=0.55	Small numbers
		Urban Paediatric Emergency Hospital 2 out of 17 independent assessors			Blinding Convenience sample
Duggan C, <i>et al</i> , 1997, Egypt	100 patients	Prospective cohort study	Level of observer agreement	k1=0.36 95% CI (0.525–0.203), k2=0.511 95% CI (0.66–0.362), k3=0.417 95% CI (0.568–0.266)	Convenience sample
	Age (2 months to 2 years)	Gastroenteritis Unit			Standardised assessment of skin turgor
Otieno H, <i>et al</i> , 2004, Kenya	100 consecutive patients	3 independent assessors Prospective cohort study	Level of observer agreement	k=0.55 95% CI (0.4–0.7)	Heterogenous group
		Age (2 days to 10 years 11 months) Rural district hospital 4 independent assessors			Nil exclusion criteria stated