

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 covered in this issue of the journal are:

- Treatment of ruptured Achilles tendon
- Treating avulsion fractures of the base of the fifth metatarsal
- Magnetic resonance imaging in acute knee haemarthrosis
- Mobilisation of lateral ligament ankle sprains

- 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.

Treatment of ruptured Achilles tendon

Report by Terry Gilpin, *Specialist Registrar*
 Search checked by Steve Southworth, *Consultant*

Clinical scenario

A 35 year old man presents with acute onset of difficulty walking which came on while playing sport. He describes sudden onset of pain at the back of the ankle. Clinical examination reveals complete rupture of the Achilles tendon. You wonder whether operative treatment is better than conservative management in this case.

Three part question

In [active patients with complete achilles tendon rupture] is [operative treatment better than conservative management] in [speeding time to recovery and improving functional outcome]?

Search strategy

Medline 1966 to 12/98 using the OVID interface. [(exp achilles tendon OR achilles tendon\$.mp OR tendoachilles.mp) AND (exp rupture OR rupture\$.mp) AND (exp emergency treatment OR exp treatment outcome OR exp treatment failure OR treat\$.mp OR treatment\$.mp)] AND maximally sensitive RCT filter;} LIMIT to human and english language.

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Table 1

Author, date, and country	Patient group	Study type (level of evidence)	Outcomes	Key results	Study weaknesses
Nistor, 1981, USA ¹	105 consecutive patients with closed acute rupture of the Achilles tendon Surgical v non-surgical treatment	PRCT	Plantar flexion measured when static and dynamic Infection Rerupture	No statistical significance 2 (operative) v 0 (conservative) 2 (operative) v 5 (conservative)	No power study
Cetti <i>et al</i> , 1993, Denmark ²	111 patients with acute rupture of the Achilles tendon Operative v non-operative treatment Assessed at 4 months and 1 year	PRCT	Rate of resuming sports activities Calf atrophy Ankle movement Complication rate	Operative significantly higher rate Operative significantly less Operative significantly better 3 reruptures (operative) v 7 (conservative)	
Lo <i>et al</i> , 1997, Canada ³	19 English language studies 1953-97 comparing operative and non-operative treatments for tendoachilles rupture (including the RCTs above) Result pooling and analysis	Review	Time to return to work Time to return to sport Rerupture rate Complication rate	No significant difference No significant difference (Significantly) higher in non-operative Moderate and minor complications significantly higher in operative group	Reviews both randomised and non-randomised studies. No formal meta-analysis was possible

PRCT=prospective randomised controlled trial.