**Search outcome**

Seventy-eight papers found of which 70 were irrelevant and five were of insufficient quality for inclusion; the remaining papers are shown in table 1.

**Comment**

Two randomised controlled trials (RCTs) and one review have been listed. The better evidence is from the RCTs since both the study selection and the statistical analysis of pooled results in the quantitative review are open to criticism. Although minor complications were more common in operatively treated patients this did not affect later outcome, whereas repeat rupture and tendon lengthening occurred more often in the conservatively treated patients.

**Clinical bottom line**

On current evidence operative repair is preferable.


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**Treating avulsion fractures of the base of the fifth metatarsal**

Report by Bruce Martin, Clinical Fellow

**Clinical scenario**

A 38 year old woman presents to the emergency department after an inversion injury of the right ankle. Clinical examination and radiography confirm that there is an avulsion fracture at the base of the fifth metatarsal. You wonder whether immobilisation in a plaster cast is better than simple support bandaging.

**Three part question**

In [an adult with an avulsion fracture at the base of the fifth metatarsal] is [immobilisation in a below knee cast better than simple support bandaging] in [controlling symptoms and speeding time to functional recovery]?

**Search strategy**

Medline 1966 to 12/98 using the OVID interface. [(metatars$.mp AND fifth.mp) AND (exp fractures OR fracture$.mp)] LIMIT to human and English language.

**Search outcome**

Eighty-two papers found of which 77 were irrelevant to the study question and four were of insufficient quality for inclusion; the remaining paper is shown in table 2.

**Comment**

This is the only trial identified in this area and it has a number of weaknesses. Further well designed and executed studies are warranted.

**Clinical bottom line**

On current evidence simple support bandages are the treatment of choice.


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**Table 2**

<table>
<thead>
<tr>
<th>Author, date, and country</th>
<th>Patient group</th>
<th>Study type (level of evidence)</th>
<th>Outcomes</th>
<th>Key results</th>
<th>Study weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiener et al, 1997, USA</td>
<td>89 consecutive patients with avulsion fractures of the base of the fifth metatarsal</td>
<td>PRCT</td>
<td>Time in support</td>
<td>No significant difference</td>
<td>No power study</td>
</tr>
<tr>
<td></td>
<td>Short leg cast v soft (Jones) dressing Followed up at 2, 4, 8, and 12 weeks</td>
<td></td>
<td>Modified foot score (pain, gait, function, walking distance)</td>
<td>No significant difference</td>
<td>Not blinded. 33% drop out rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Time to full activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Time to bony healing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PRCT=Prospective randomised controlled trial.

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**Magnetic resonance imaging in acute knee haemarthrosis**

Report by Ashes Mukerjee, Research Fellow

**Clinical scenario**

A young man comes into the emergency department after sustaining a knee injury while playing football. Examination reveals a tense haemarthrosis; there is no evidence of fracture on radiography. You wonder whether magnetic resonance imaging (MRI) would be better than arthroscopy to establish a diagnosis.

**Three part question**

In [young adults with acute knee haemarthrosis with no obvious fracture] is [early MRI better than arthroscopy] in [diagnosing intra-articular pathology]?
**Search strategy**

Medline 1966 to 12/98 using the OVID interface. [{exp magnetic resonance imaging OR magnetic resonance image$.mp OR magnetic resonance imaging.mp OR MRI.mp OR exp nuclear magnetic resonance OR NMR.mp} AND {exp knee OR exp knee injuries OR exp knee joint OR knee$.mp} AND {exp haemarthrosis OR haemarthrosis.mp OR haemarthrosis$.mp}]] LIMIT to human and English language.

**Comment**

Arthroscopy was used as a gold standard in both selected studies. MRI lacks both the sensitivity required for a SnOut and specificity required for a SpIn on this evidence. The evidence only applies to the conditions stated (haemarthrosis and investigation within one week) and different results might be found at different times.

**Clinical bottom line**

The evidence does not support early use of MRI scanning in acute knee haemarthrosis.


**Search outcome**

Twenty six papers found of which 24 were irrelevant to the study question or of insufficient quality for inclusion; the remaining papers are shown in table 3.

**Table 3**

<table>
<thead>
<tr>
<th>Author, date, and country</th>
<th>Patient group</th>
<th>Study type (level of evidence)</th>
<th>Outcomes</th>
<th>Key results</th>
<th>Study weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lundberg et al, 1996, Sweden¹</td>
<td>69 patients with unilateral knee haemarthrosis</td>
<td>Prospective single blind diagnostic</td>
<td>ACL tears</td>
<td>Sensitivity 86%, specificity 92%</td>
<td>Small sample size</td>
</tr>
<tr>
<td></td>
<td>MRI within 2 days of arthroscopy at a mean of 6 days</td>
<td></td>
<td>Medical meniscal tears</td>
<td>Sensitivity 74%, specificity 66%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Medial collateral ligament tears</td>
<td>Sensitivity 50%, specificity 84%</td>
<td></td>
</tr>
<tr>
<td>Adalberth et al, 1997, Sweden¹</td>
<td>40 patients with acute traumatic intra-articular haemorrhage</td>
<td>Prospective diagnostic</td>
<td>Lateral meniscal tears</td>
<td>Sensitivity 94%, specificity 29%</td>
<td>Small sample size</td>
</tr>
<tr>
<td></td>
<td>MRI within 1 week of arthroscopy within 1 week</td>
<td></td>
<td>Medical meniscal tears</td>
<td>Sensitivity 83%, specificity 27%</td>
<td></td>
</tr>
</tbody>
</table>

ACL = anterior cruciate ligament.

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**Mobilisation of lateral ligament ankle sprains**

Report by Gordon Higgins, *Medical Student*

Search checked by Bruce Martin, *Clinical Fellow*

**Clinical scenario**

A 28 year old man presents to the emergency department with a swollen, bruised, and painful ankle after an inversion injury. After examination and appropriate investigations a grade 2 inversion ankle sprain is diagnosed. You wonder whether early mobilisation or immobilisation in a short leg cast is more suitable for this patient.

**Three part question**

In [adults with lateral ligament ankle sprains] is [immediate mobilisation better than immobilisation in a cast] at [decreasing pain and reducing time to full recovery].

**Search strategy**

Medline 1966 to 12/98 using the OVID interface. [{exp ankle OR ankle$.mp OR exp ankle injuries OR exp ankle joint OR exp lateral ligament, ankle} AND {exp sprains OR sprain$.mp} AND {mobilis$.mp OR mobilisation$.mp OR mobilization$.mp}] LIMIT to human and English language.

**Comment**

While many papers have addressed the question there are few relevant RCTs. The two relevant reviews do not address the question directly and do not attempt formal meta-analysis.

**Clinical bottom line**

Early mobilisation of ankle sprains leads to quicker short term recovery without affecting long term outcome. It is the treatment of choice.


The BMA Library supplied the papers.