

COCHRANE CORNER



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KNEE ORTHOSES FOR TREATING PATELLOFEMORAL PAIN SYNDROME

Patellofemoral pain syndrome (PFPS) can be difficult to treat and, in the absence of distinct pathologies and with an unclear aetiology, most patients are treated with physiotherapy to improve patellofemoral mechanics. As well as exercises, our physiotherapists often give straps or braces to help with mal-tracking. This new intervention review from the **United Kingdom** looked to assess the efficacy of these orthoses to treat PFPS.¹ The authors of this review identified five eligible trials for inclusion in their meta-analysis reporting on a total of 368 patients. Trial comparisons included: orthoses and exercises *versus* exercises alone, orthoses alone *versus* exercises alone, and different orthoses compared against each other.

The authors concluded that there was 'very low' quality evidence to support the use of knee orthoses and exercise over exercise alone for short-term pain and knee function, and were not able to identify any reported clinically important differences. Three trials made single comparisons of orthoses to include either braces, sleeves, straps or patellar rings. No significant differences were identified between these and, while only one trial compared orthoses alone against exercise alone, again no important differences were found.

Currently accepted practice in the UK usually results in patients with PFPS being managed with physiotherapy and an exercise programme and, although braces are not commonly used, 'strapping' is a commonly utilised physiotherapy adjunct. Taking the results of this review at face value, albeit with poor quality evidence, this appears to be an evidence-based approach and the use of orthoses should be avoided as there is little proof of efficacy.

SURGERY FOR DUPUYTREN'S CONTRACTURE OF THE FINGERS

This new intervention review from **Nottingham (UK)** evaluated surgical treatment for this pathology so commonly seen in elective hand clinics. Different surgeries and techniques are described to correct the disabling contractures seen in Dupuytren's disease, and this study looked to assess the outcomes of these.

The clinical review team identified 13 trials, all of which were suitable for review, reporting on the outcomes of a total of 944 hands. The authors reported on studies comparing different surgical procedures (interposition firebreak skin grafting *versus* z-plasty after limited fasciectomy, needle *versus* limited fasciectomy), types of incision, wound closure options (suture type, staples *versus* suture, dressing type), and intra-operative

adjuncts to surgery (5-FU solution, steroid injection) as well as types of rehabilitation splinting. A variety of outcome measures were used in the studies to include recurrence, flexion/extension deficit and PROMS.²

This rigorous Cochrane review thoroughly examines all of the individual comparisons in detail. The authors outline some key results, including the possibility at five years of better satisfaction after fasciectomy as compared with needle fasciectomy, with recurrence more common after needle fasciectomy than fasciectomy, and no clear benefit of post-operative splinting. These key findings from the review were, however, all based on low quality evidence and, as the authors state in their conclusion, there is insufficient evidence from which to draw firm conclusions.

INTERVENTIONS FOR TREATING PROXIMAL HUMERAL FRACTURES IN ADULTS

In an update of a previously published review in 2012, this work from **Denmark** has found a number of new studies and good quality evidence, most significantly the ProFHER study (published earlier in 2015), on which to make recommendations to change our practice.

There has been a general consensus that stable undisplaced fractures are best managed conservatively with early mobilisation and this was agreed in earlier versions of the review, however, debate continues concerning decisions surrounding the operative management of displaced and more complex fracture patterns.

Of the 31 RCTs included in this review, eight trials of 567 participants with displaced fractures compared operative *versus* non-operative management (although this did not include more complex patterns or dislocations). Moderate to high quality evidence showed no difference in reported outcomes at one and two years when evaluating patient-reported function and quality of life.³ These results have certainly changed our management of the common cohort of elderly displaced proximal humeral fractures. Nonetheless, more evidence is required for the specific complex fracture patterns and dislocations.

SURGICAL FIXATION METHODS FOR TIBIAL PLATEAU FRACTURES

This intervention review from **Norwich, UK** looked at the variety of techniques involved in the fixation of tibial plateau fractures and identified six trials, with a total of 429 participants, eligible for review.

Three trials included comparisons of surgical technique: hybrid fixation of percutaneous screws and circulator fixation *versus* standard open reduction internal fixation (ORIF), minimally invasive plating *versus* double plating, and arthroscopically assisted ORIF *versus* standard ORIF. All

the evidence presented in these studies was graded low or very low quality, and as such no conclusions could be drawn.⁴

The review also identified three trials looking at bone substitute in comparison with autologous bone graft for filling the bone voids associated with these fractures. Similar complication rates were found in both groups in all three trials. Two trials found similar range of motion in both groups while a single trial confusingly found less radiologically detected osteoarthritis at 11 years in the bone substitute group.⁴ However, the evidence presented has been graded as 'very low' by the authors and, as such, again no firm conclusions can be drawn.

REHABILITATION FOR DISTAL RADIAL FRACTURES IN ADULTS

Rehabilitation prescribed for this common injury seen in fracture clinic, whether managed conservatively or operatively, is often varied. Some units prescribe formal courses of (varying) rehabilitation, other units have (varying) advice sheets and in some, patients are invited to 'get on with it'. This updated review from the **United Kingdom** looks at the efficacy of the rehabilitation interventions available. The review team identified a whopping 26 RCTs, reporting on a total of 1269 patients, all of which, however, were graded as providing low or very low quality evidence.

Hand therapy during cast immobilisation *versus* instructions only, as well as early occupational therapy, showed some beneficial effects in the short term, but not in the longer term.⁵ Very low quality evidence was found to support marginal clinical benefit with pulsed electromagnetic

field or cyclical pneumatic compression when used during immobilisation in addition to standard physiotherapy.

Some merit was found in a single session of physiotherapy after cast removal *versus* no intervention at all. There was also some benefit seen in short-term hand function in those given formal physiotherapy rather than home instructions by a surgeon. However, four trials showed a lack of clinically important differences when these home instructions were given by a therapist when compared with receiving routine physiotherapy or occupational therapy.

The review highlights a larger number of comparisons, but all with low quality evidence reflecting a significant uncertainty when interpreting the findings. Unfortunately, the authors of the review did not find sufficient evidence to inform practice.

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