

COCHRANE CORNER



New and updated reviews published by the Cochrane collaboration

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Things have not been quiet in the Cochrane Collaboration in the four months since the last 'Cochrane Corner', with the publication of six new or updated reviews summarised here, all conducted with the bulletproof Collaboration's methodology representing the pinnacle of evidence relevant to orthopaedic surgeons.

■ A study group from **York (UK)** have updated their review on skin asepsis. While we all appreciate that sterility is paramount in orthopaedic surgery and most surgeons would declare themselves in either the 'pink' or 'brown' camp (notwithstanding the oddities who insist on 'pink and clear' or 'brown and clear'), here at 360 we certainly aren't completely up-to-date with the current literature. This updated review, evaluating pre-operative skin antisepsis in clean surgeries, identified 13 suitable trials with a total of 11 different comparisons. Most compared different iodine-containing products with each other while five compared iodine-containing products with chlorhexidine-containing products. A single study reported reduced risk of surgical site infections (SSI) with 0.5% chlorhexidine in methylated spirit compared with an alcohol-based povidone-iodine solution. However, this study was poorly reported with an unclear risk of bias. No significant differences in SSI rates were found in other comparisons though the authors report a limited quality of evidence with studies only randomising small numbers of participants.¹ Currently it therefore seems that the dividing line is indeed simply the colour.

■ While there is universal agreement over the benefit of operative treatment of debilitating carpal tunnel syndrome, the effectiveness of post-operative rehabilitation strategies is less clear. A new review from Australia aimed to shed some light on the benefits (or otherwise) of rehabilitation strategies. This thorough review included 20 trials, all of which compared differing rehabilitation interventions with one another or with placebo. Interventions evaluated included immobilisation, dressings of various types, exercise programmes, controlled cold or ice therapy, multimodal hand rehabilitation, laser therapy, electrical modalities, scar desensitisation and arnica. The authors report that, universally, these studies were very low in quality with limited evidence for the efficacy of the interventions that were reviewed. It never ceases to amaze us at 360 that despite well-conceived research infrastructure and universally recognised methodology, trial designers consistently fail to design reasonable quality studies suitable for inclusion in meta-analysis. Indeed, amongst the 22 suitable studies, only one high quality study was available reporting the primary outcome measure (change in self-reported functional ability at three months or longer). This single small study reported no statistically significant functional benefit of a desensitisation programme compared with standard treatment. Given the limited evidence, the authors suggest practice based on the clinician's experience and patient preference.² Here

at 360 we would be bold enough to go slightly further and suggest staying well clear of the arnica, lasers and electric therapies for which there is no evidence until such evidence exists.

■ An updated review from **Peterborough (UK)** examined the evidence for extramedullary implants in treating extracapsular hip fractures. Most of the 18 included trials compared a sliding hip screw with various other implants including fixed nail plates, the Pugh nail, the Medoff plate, the Gotfried percutaneous compression plate and external fixators. While the authors found mixed results and insufficient evidence to draw conclusions from most of the comparisons, they did note an increased failure rate of fixations with fixed nail plates when compared with the sliding hip screw.³

■ In an industrious couple of months a further updated review concerning interventions in carpal tunnel syndrome has been undertaken in Australia. This review examined the relative efficacy of therapeutic ultrasound for carpal tunnel syndrome when compared with other non-surgical interventions, no treatment or placebo. Eleven studies were suitable for inclusion, reporting the results of a total of 414 participants. A single included trial found that therapeutic ultrasound may increase the chance of short-term improvement, though this was a small trial and the review team identified limitations in their evidence and a poor quality of study design. Most of the other included trials compared ultrasound, or ultrasound as part of a multimodal intervention, with other non-surgical interventions such as splinting. There was insufficient evidence to draw conclusions from these trials.⁴ Perhaps much like the other alternate therapies examined by the Cochrane Collaboration recently, these treatments would be best avoided for the present.

■ A new review from **Sichuan (China)** examined the treatment of radial head fractures. The authors were only able to include two trials comparing radial head replacement with internal fixation for Mason type III fractures. Results were in favour of radial head replacement, showing significant differences in the Broberg and Morrey elbow scores as well as overall adverse events. The authors advise tentative conclusions as they felt the trials were at risk of bias and therefore of low quality. No RCTs were found comparing operative- with non-operative treatment for this review.⁵

■ Finally, a new review from Brazil looked at surgical *versus* conservative treatment for treating middle third clavicle fractures. While previous Cochrane Reviews have compared different non-operative or various operative treatments, this is the first to compare both together. Eight trials involving 555 patients were included in the review (four studies compared plate fixation with wearing a sling, four studies compared intramedullary fixation with a sling or figure of eight bandage). Low-quality evidence from seven pooled trials showed no clinically or statistically significant

improvement in upper arm function at one year or more for the operative group. The authors found a small difference in the incidence of treatment failure in the conservative group, with one particular trial producing a number of malunions in that group. However, with low quality and limited evidence, the authors could not draw any conclusions. Furthermore, there were insufficient data from the trials for subgroup analysis for timing of surgery, number of fragments or displacement.⁶

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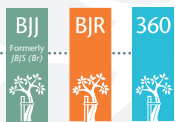
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