

COCHRANE CORNER



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ANAESTHESIA FOR HIP FRACTURE SURGERY IN ADULTS

The hip fracture population, fraught with frailty and medical comorbidities, have a high risk of morbidity and mortality. There have been huge improvements in the care pathway for these patients to improve outcomes over the last decade, an important facet within which has been the anaesthetic package. This updated review is an international collaboration which specifically looks at regional anaesthesia alone versus general anaesthesia alone for proximal femur fracture repair.¹

The review included 31 trials (reporting the outcomes of 3231 patients). Meta analyses of suitable studies within this 31 did not find any difference in mortality at one month (11 studies of 2152 participants), no difference in risk of pneumonia (six studies of 761 participants), no difference in the risk of post-operative myocardial infarction (four studies of 559 participants), no difference in risk of stroke (six studies of 729 participants) and no difference in perioperative acute confusional state (six studies of 624 participants).

The review did find that when chemical thromboprophylaxis was not used, the risk of deep vein thrombosis (DVT) was reduced with regional anaesthesia but there was no difference in DVT risk if prophylaxis was used.

While there are a large number of trials in this research area, the authors state that the clinical practice across them is varied and that the quality of evidence is low, raising uncertainty over the conclusions drawn from this meta-analysis. There are likely to be situations when patients have strong indications for a spinal anaesthetic or a general anaesthetic, but for patients that can have both there seems no firm evidence either way, and we can continue to base the choice on anaesthetist and patient preference. It must be noted, however, that this review did not include trials evaluating the intra- or peri-operative use of blocks alongside general anaesthesia.

REHABILITATION FOLLOWING CARPAL TUNNEL RELEASE

The post-operative management of carpal tunnel decompression surgery is rather heterogeneous, with varied surgeon preferences in dressings and splints not to mention the myriad of multi-modal therapies. This updated review from **Australia** looked at the trial data for some of these rehabilitation interventions.²

The authors found 22 trials comparing interventions against one another or against a 'no treatment' control or placebo. These studies found no statistically significant differences between the various therapies trialled. In short, there are apparent benefits of bulky dressings, splints,

early mobilisation or combinations of hand therapy over any other post-operative protocol. Perhaps less surprisingly there was limited evidence to suggest any efficacy with desensitisation, the use of arnica, laser therapy or electrical stimulation.

This 'low quality' and limited evidence base leaves the surgeon with only their experiences to inform the prescription of post-operative management, from the huge array of rehabilitation interventions that are available to the patient. In common with many complex interventions, it appears the best evidence is perhaps still expert opinion. What is clear from the assembled evidence, however, is that there is little excuse for offering expensive and time-consuming therapies post-operatively.

AQUATIC EXERCISE FOR THE TREATMENT OF KNEE AND HIP OSTEOARTHRITIS

With the increasing expectations amongst patients as a whole, and particularly in the younger population, treatments that can alleviate symptoms and delay joint arthroplasty surgery are becoming more and more important. This updated review from **Denmark** evaluated the effects of aquatic exercise for people with hip and/or knee arthritis, compared with no intervention.³

This review found 13 trials whose participants (n = 1190) were mostly female, with a mean age of 68 and BMI of 29.4. These participants received an average of 12 weeks of physical exercise intervention in water. The authors found a moderate quality evidence that such exercise may have 'small', 'short-term' clinically relevant benefits on patient-reported pain and disability outcome scores, with the caveat that the conclusions were drawn from a very mixed population of participants with knee and hip OA.

Given the lack of adverse effects, it seems not unreasonable to offer hydrotherapy in patients in whom symptoms are difficult to manage in any other way. This said, clearly this is not a long-term solution, and surgeons and patients can be forgiven for being sceptical given the data presented here.

INTERVENTIONS FOR TREATING STABLE ANKLE FRACTURES IN CHILDREN

This new review from the **UK** identified found three trials (reporting the outcomes of 189) evaluating non-surgical management options for the 'low-risk' fractures we see in children with obviously stable injury configurations.⁴

Two trials compared an air cast stirrup brace with a rigid cast (one trial removing both at two weeks, the other removing the stirrup at five days *versus* walking cast for three weeks). Low-quality evidence favoured the stirrup group in both trials in function scores at four weeks, with the latter trial quoting a mean difference of 6% in scores with 5% equating to a clinically important difference. The authors also quote very low-quality evidence from both trials suggesting a quicker return to pre-injury activity in stirrup groups and moderate quality evidence suggesting no difference in pain. Neither trial reported any unacceptable outcomes. Similar conclusions, though supported by only 'very low-quality evidence', were drawn from the third trial comparing Tubigrip (Mölnlycke Health Care, Oldham, UK) and crutches *versus* walking cast for two weeks.

SURGICAL VERSUS CONSERVATIVE INTERVENTIONS FOR TREATING ANTERIOR CRUCIATE LIGAMENT (ACL) INJURIES

This new review from **Oxford, UK** looks at this common injury affecting our young active population, with a view to evaluating whether ligament reconstruction gives better overall outcomes than non-surgical treatment.⁵

The authors found one suitable trial that treated adults (aged between 18 and 35) randomising treatment to either ACL reconstruction and structured rehabilitation, or structured rehabilitation alone.⁶ The study found no difference between the two groups in patient-reported knee scores at both two and five years. However, there were far fewer treatment failures in the ACL reconstruction group (graft failure) than in the conservative group (subsequent ACL reconstruction).⁵ A total of 51% of patients in the

conservatively-treated group elected to have ligament reconstruction at five years for knee instability.⁵

We must be cautious in drawing conclusions from one study, and the authors do suggest the overall quality of the evidence was low, with a high-risk of bias.⁵ It is important to remember that knee instability can be associated with meniscal tears, which in themselves carry a high risk of long-term degenerative sequelae. With further good-quality studies, if the results are reproduced; the high number of patients failing conservative management by five years with ongoing instability perhaps advocates ligament reconstruction in these symptomatic young adults. This is somewhat in contrast to those studies on older patients where the results are very much equivocal in the older patient population.

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