

ROUNDUP³⁶⁰

Wrist & Hand

Scaphoid screws out?

x-ref Trauma

■ The humble scaphoid fracture is still a challenge to know how to treat, and with a number of randomised controlled trials (RCTs) ongoing, we hope, here at 360, that the decision making surrounding treatment of scaphoid fractures will become more and more evidence-based over the next few years. The first of these studies to report is from **Lund (Sweden)**, in a prospective RCT evaluating the treatment of undisplaced scaphoid fractures using arthroscopic screw placement or conservative treatment.¹ The authors randomised patients to either arthroscopic surgical fixation or plaster immobilisation in a below-elbow thumb spica cast. Patients were allocated to one treatment modality or another and follow-up was achieved with both clinical scores and radiographic outcomes at a maximum of six years' follow-up. The authors conclude that in the shorter term there may be better clinical outcomes in the operatively-treated fractures, but the higher rates of subsequent arthrosis on radiographs outweigh these benefits and, as such, conservative treatment remains the preferred option. While on the face of it this is a well-designed study with appropriate outcome measures and suitable inclusion criteria, in a study of 38 patients where only 14 ended up in the operative treatment arm one has to ask serious questions about randomisation, trial design,

and - crucially - whether this study could possibly have reached power with such unevenly sized groups. Sadly there don't appear to be any valid conclusions that can be drawn from this study due to these limitations.

Stiff fingers under the spotlight

■ Contracture of the IP joints of the hand can be a tricky and challenging diagnosis to treat. Often associated with diabetes or enthesopathies, some are seemingly idiopathic. Treatment is challenging and, with surgical release, almost always futile, patients are often referred on to hand therapists in the hope that an appropriate splintage and exercise programme may solve the problem. However, the question remains – does it help? – and if so, what form of splintage is most effective? Therapists in **Brisbane (Australia)** set out to test two forms of splintage: static and dynamic orthoses in the treatment of proximal interphalangeal joint (PIPJ) contracture.² Outcomes were assessed using objective measures of PIPJ flexion contracture and a control group of standard hand therapy was also included. Outcomes were assessed at a sensible three months following the start of therapy. The results were interesting, with the progressive static and dynamic orthoses leading to an improvement in outcomes as opposed to hand therapy alone. There are precious few studies such as this looking at variations in standard

practice – we commend the authors on their valuable contribution.

Trigger finger: is complexity needed?

■ The ancient maxim of 'First do no harm' is as relevant now as it was in Ancient Greek times. As surgeons, we should always try simple things first, before resorting to surgery – this is just as true for simple procedures as it is for more complex surgery. Trigger finger is a common and disabling problem where injection with corticosteroid is an excellent example of this non-operative approach. Not perhaps as exciting or cutting edge as other diagnoses or procedures, however, researchers in **Missouri (USA)** have shared their experience in a large case series.³ They report the results of 366 steroid injections administered for a first-time diagnosis of trigger finger. The authors used telephone interviews to provide prospective follow-up and Kaplan–Meier analysis to estimate treatment success. Their case series reports the patients up to around five years of follow-up and the authors report an overall cure rate of 45% by at least two years or more by a single injection. These investigators went on to explore predictors of success for treatment, and were able to identify that sex and the number of affected digits had a profound effect on longer-term treatment success. Female patients with a single involved digit had a remarkable success rate of 56% at ten years, falling to just 37% in male patients with multiply-

involved digits. Failure of one or two injections is often considered as an indication for surgery. The most common surgical approach employed is perhaps the simplest: release of the A1 pulley. However, if release is delayed, a secondary fixed flexion can develop at the PIP joint, leading to a difficult-to-treat condition. Perhaps at the other end of the complexity spectrum, researchers in **Pellenberg (Belgium)** have described their approach using excision of one of the slips of FDS rather than release of the A1 pulley.⁴ This approach does seem more likely to improve outcomes in these cases. The authors report their experience of the ulnar superficial slip resection (USSR), described initially by Le Viet, to address this problem. This simple case series of 18 incidences of trigger finger with acquired secondary fixed flexion of the PIP joint treated with USSR is suggestive of encouraging results, with all patients achieving full extension after the procedure. These two papers illustrate the difficulties with seemingly simple conditions. Less is certainly more, initially, but careful thought is often required to adequately address the sequelae of common problems when complications arise.

Do we really need to replace the base of the thumb?

■ As orthopaedic surgeons we are drawn to implants. Perhaps we intuitively feel that replacing a joint must be better than merely excising or fusing it. Even the most naïve of

us would perhaps admit that the novelty and glamour of newer, technically challenging, cutting-edge surgery has more than a little draw for the average orthopaedic surgeon. Within the realms of hand surgery the topic of the widely published, excellent clinical and durable survivorship outcomes reported in patients with hip and knee arthroplasties is attractive. There remains optimism that these can be replicated in the arthroplasty of the base of the thumb, leading to multiple hopeful publications. A review team from **Zhejiang (China)** undertook a comprehensive PRISMA-compliant review of the literature to see precisely where we are with results of this inviting procedure.⁵ The study team identified outcome reports detailing results of 19 different implants, with the majority of evidence reaching a mediocre quality at best, and describing implants which were of dubious reliability. The review team make the well-argued point that the results are so variable between prostheses and reports that making sense of the literature is almost impossible – some prostheses are reported with acceptable longer-term outcomes beyond ten years, where others have unacceptably high early failure rates. On this basis alone, not to mention the lack of high quality or randomised data, there is little evidence that the cost and uncertainty of these new implants offer more than the traditional 60-year-old gold standard trapeziectomy.

Scapholunate ligament injuries and their treatment: a missed research opportunity?

x-ref Trauma

■ Scapholunate ligament injuries remain poorly understood, despite the spotlight on their treatment and diagnosis. In some cases, injuries will be complete and secondary stabilising structures will be lost such as dorsal extrinsic and scaphotrapezoidal joint ligaments. This progresses to cause

a DISI radiograph appearance as the lunate extends and scaphoid flexes (dissociating). This process is linked to the development of a characteristic degenerative wrist pattern called scapholunate advanced collapse (SLAC), and over many years this progresses to a disabling arthrosis. As such, prompt diagnosis of this type of injury is important and failure to diagnose and treat could potentially be regarded as negligent. The wrist arthroscopic community has seized on this, and in many centres enthusiastically arthroscopically look for scapholunate ligament tears. Rosales points out in ‘Clinical research in hand surgery’ **Tenerife**



(Spain) that, despite increasing use, the efficacy has only been studied in four randomised studies with a median modified Jadad score (RCT quality assessment tool 0 to 5, best) of 0.5.⁶ He draws a parallel between this and 50 arthroscopic studies in shoulders where a Jadad score of 3 was achieved. Those studies describing experience of arthroscopically assessed radiocarpal joints after injury show a high percentage of patients present with evidence of SL ligament injuries which is rather concerning. Anecdotally, however, there is a mismatch between a common injury (e.g. wrist fracture) and a late-presenting SLAC wrist which is rare, implying informally that clinically it might not really matter if you have a low grade SL injury.

Researchers from **Derby (UK)** have shed some more light on this with the reporting of a long-term follow-up study describing the outcomes of arthroscopically diagnosed scapholunate ligament injuries.⁷ Their study concerns the outcomes of 51 patients, all with distal radial fracture undergoing arthroscopy. In the initial series 32 patients had evidence of scapholunate ligament injury, and follow-up at a minimum of 13 years was achieved in 38 patients. Of those with a tear, there were ten with a complete tear and 22 a partial tear in association with 32 AO type C fractures. Given the outcomes reported here in the longer term (median DASH score 2/100, grip strength 83%) in patients with a complete tear (compared to 92% in patients with no or partial SL tears), the data from these authors really do suggest that arthroscopically diagnosed grade 1 to 3 injuries can be managed non-surgically – don’t let the arthroscopists upset you!

Proximal row carpectomy versus four-corner arthrodesis

■ Perhaps the most interesting of a range of papers from the European volume of *Journal of Hand Surgery's* special ‘meta-analysis edition’ caught our eye this month here at 360 HQ. A review team from **Chicago (USA)** turned their beady eyes to reporting outcomes of proximal row carpectomy (PRC) versus four-corner fusion, and specifically in the treatment of post-traumatic wrist arthropathy.⁸ The review team were able to assemble the results of seven studies (242 wrists reported) with remarkable similarity in the pre-operative demographics. Surprisingly, the outcomes were also remarkably similar. The fusion group (as perhaps might be expected) had a slightly better post-operative grip strength, while the PRC group sported slightly better movement (mean 12°) and a lower complication rate. Like many well developed surgical techniques where two competing options are in widespread

use and neither has been shown to have the edge, it would seem that selecting the operation that suits either the patient (greater strength vs motion) or surgeon (experience) is the best choice here.

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