

hindfoot fusion, and further similar quality studies in other indications are also clearly required.

Achilles tendon rehab in the longer term following surgery

■ There are no long-term prospective randomised controlled trials comparing post-operative regimens after Achilles tendon rupture repair. Although there are a number of smaller studies investigating short-term outcomes, there are no longer-term outcome studies available. In the only such study (to our knowledge) of a randomised controlled trial of early weight-bearing with or without mobilisation, researchers from **Oulu (Finland)** have reported the ten-year outcomes of these two regimes. The early mobilisation group were able to bear weight and mobilise their ankles between neutral and plantar flexion. Of the original 50 patients, a total of 37 were available at 11 years post-operatively. Outcomes were reported with clinical outcome scores and isokinetic strength. Interestingly, although the majority

of patients were satisfied, there were still measurable reductions in peak strength at over a decade of follow-up, with deficit of 5% of ankle torque at final follow-up. Perhaps surprisingly, there were no differences in outcomes between the two regimes.⁵ We would love to see a similarly long-term follow-up of an operative *versus* non-operative study which is perhaps the more pertinent question at this point in time.

Telemedicine for diabetic foot ulcer

■ Most major health burdens are in the 'glamorous' parts of medicine - cancer, heart disease and trauma - which are all major causes of morbidity and mortality. One can't help thinking that diabetic patients get the thin end of the wedge. Diabetic foot ulcers carry with them major morbidity and mortality and require specialist input from centralised services able to provide a multidisciplinary approach to care. In the absence of major charities and glamourisation, innovative foot and ankle surgeons in **Odense (Denmark)**

have turned to telemedicine to provide specialist services to those who struggle to get it.⁶ They report the results of their efforts in a study of 401 patients with diabetic foot ulcers who were randomised to either standard follow-up or telemedicine follow-up (with every third visit being face to face). Outcomes were assessed as rates of wound healing and a Cox proportional hazards model was constructed which demonstrated that type of follow-up did not determine the likelihood of wound healing rates (HR = 1.11) or amputation (HR = 0.87), although curiously there was a statistically higher mortality rate in the telemedicine group. Further analysis is clearly needed to establish why this was, and whether the deaths could have been preventable with more frequent face-to-face visits. Until this has been established, the role of telemedicine in diabetic foot ulcer monitoring is clearly unclear!

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Wrist & Hand

For other Roundups in this issue that cross-reference with *Wrist & Hand* see: **Trauma Roundup 10; Research Roundup 3, 4, 6.**

Base of thumb arthritis – steroids not a waste of time

■ Should we inject arthritic joints with steroid? It seems that almost all joints that can, are injected. The injection itself cannot, however, change the pathology and rescue the joint. On the other hand, steroids can, and do, reduce the inflammation associated with flare-ups of the disease. Anecdotaly, patients often find the injection helps, at least for a while, and they often come back for another. In a

disease process like trapeziometacarpal arthritis where the disease is known to burn out, perhaps the key question is whether for some patients the injection will remove the need for surgery by controlling the symptoms in the meantime. A team from **Derby (UK)** have undertaken a thorough systematic review with the aim of answering just this question.¹ Following a comprehensive search, 118 publications were initially identified, of which just nine papers fulfilled the authors' inclusion criteria. These were all prospective studies, with four RCTs and five prospective case series; the quality of the evidence on which this review is based is surprisingly

good. Despite a range of disparities in study design, outcome reporting and methods, the majority of studies found a transient benefit for intra-articular steroid injection into the TMJ. Having reviewed all the indexed studies on injecting this joint, the authors found that it does help for at least one to three months.

De Quervain's tenosynovitis and steroids

■ While on the topic of steroid injections, we here at 360 are never ones to shy away from controversy. Local steroid injection in de Quervain's tenosynovitis is a well-used and accepted technique, but is it any good? With this very painful

condition, patients will often find therapy alternatives such as ultrasound and massage to be just too painful, so the question is, do local steroid injections offer a conservative option for those not wishing to undergo (or who are not suitable for) release?² A prospective study reported by researchers in **Boston (USA)** was designed to establish the efficacy of local anaesthetic and triamcinolone injections in de Quervain's. Their study reports the outcomes of a consecutive series of 50 patients, all treated with steroid injections for isolated primary de Quervain's. Outcomes were assessed at regular intervals up to a year following injection, and the authors

reported their results using Kaplan-Meier survival analysis. These authors report that in 82% of patients, symptoms had resolved by six weeks, but that the symptoms recurred in 48%. Interestingly, if symptoms had not recurred within six months then these authors report that they are unlikely to recur at all. The evidence presented does suggest that de Quervain's may be treated effectively in the majority of cases with steroid injection.

Use your therapy time wisely!

■ Hand surgeons regard their hand therapist as one of the cornerstones of successful practice, but while the value of hand therapy in general is without doubt, precious little data exist on who precisely will benefit. Surely it is better to use their time for those who really need it when problems such as unexpected stiffness are likely to emerge? A group from Clarks Summit in **Pennsylvania (USA)** set out to evaluate the benefit of hand therapy interventions in patients post-distal radial fracture fixation. The study team randomly allocated 50 consecutive patients with a surgically treated distal radial fracture to either a hand therapy programme administered by a therapist twice a week, or to perform the same programme of exercises at home without supervision. Outcomes were assessed primarily using the Patient Reported Wrist and Hand Evaluation (PRWHE). Outcomes including PRWHE, composite motion arcs and grip strengths were measured at three and six months.³ In short, the study team were unable to find any difference in outcome, however, it is important to remember that those with problems could revert to hand therapist supervision.

Excision osteotomy for the carpometacarpal joint?

■ Trapeziectomy is the earliest described, and probably the most widely used, operation for thumb base arthritis. While the outcome is usually acceptable and durable, concern about the effect of losing thumb

ray length and stability, with consequent loss of pinch, has prompted the use of several implants, suspensions and other modifications. Not all have fared well, and for most clinicians, the trapeziectomy remains the technique of choice.⁴ A group from **Pittsburg (USA)** remind us in their retrospective series that a simple extension osteotomy should be seriously considered in suitable patients as an alternative. Their study of just 13 patients, all of whom underwent metacarpal excision osteotomy for early carpometacarpal joint (CMC) OA, reports results at an impressive ten years of mean follow-up. The authors were able to report equal grip strength compared with the contralateral side, low pain scores and equal mobility to the non-operative side. All in all, good results are reported here, admittedly in a small group of patients, but with long-term follow-up. It is good to remember that other techniques can preserve thumb length and stability without the uncertainty of replacement or excision.

with collagenase. With the five-year outcomes report, some answers are at last available. The study reports the outcomes of 644 patients (from a possible 950 patients) enrolled in the original efficacy trials, which led to licensing of collagenase as an intervention for Dupuytren's. The present report concerns an interval review after at least five years of follow-up. Patients were all reviewed annually as part of the safety and efficacy monitoring.⁵ As perhaps could be expected, 39% of metacarpophalangeal cords and 66% of proximal interphalangeal cords recurred within the five-year follow-up of the study. While this study reports a rather high recurrence rate, here at 360



CORDLESS at five years?

X-ref Research

■ There is a mantra that the best surgeons try to avoid surgery. Collagenase has emerged over the past five years as an effective way of reducing cords of Dupuytren's disease, with early outcomes reported as similar to surgery and needle fasciotomy. The concern lurking at the back of clinicians' minds has always been recurrence. The drug dissolves a segment of disease but does not usually remove the whole cord, nor the cells that produce the contracting matrix. CORDLESS is a longitudinal study originating in **Michigan (USA)**, examining the natural history of Dupuytren's disease treated

with collagenase. With the five-year outcomes report, some answers are at last available. The study reports the outcomes of 644 patients (from a possible 950 patients) enrolled in the original efficacy trials, which led to licensing of collagenase as an intervention for Dupuytren's. The present report concerns an interval review after at least five years of follow-up. Patients were all reviewed annually as part of the safety and efficacy monitoring.⁵ As perhaps could be expected, 39% of metacarpophalangeal cords and 66% of proximal interphalangeal cords recurred within the five-year follow-up of the study. While this study reports a rather high recurrence rate, here at 360

we would venture that this may be expected in the context of the ease of both the original procedure and any subsequent interventions.

Arthroscopy again of no benefit?

Arthroscopy again of no benefit?

x-ref Trauma

■ It seems that, whatever the discipline - knee, shoulder, wrist or hip - there has been a spate of papers recently undermining the clinical benefit of a huge range of treatments, many of them (as in the case of subacromial decompression) from large-scale randomised controlled trials and concerning widely accepted treatments. Researchers from **Matsuyama (Japan)** present another poke in the eye for arthroscopists, and wrist arthroscopists in particular. In what may prove to be an important paper both for fracture surgeons and hand surgeons alike, their randomised controlled trial addresses the question of arthroscopic assistance in fixation of unstable wrist fractures.⁶ The study

reports the outcomes of 74 wrists, all with AO Type C unstable fractures. Arguing that the benefits or otherwise of arthroscopic assisted fixation are yet to be proven, the authors of this trial randomised participants to receive arthroscopic and fluoroscopic assessment and reduction, or fluoroscopic alone in conjunction with volar plate fixation. Outcomes were assessed with a combination of DASH scores, grip strength (assessed at 48 weeks) and radiologic parameters (assessed using CT at 12 weeks). In short, like so many studies, there were no differences in any outcome measures reported or recorded. Fluoroscopy represents the widely accepted current standard across the world, and it is always troubling when a group proposes a more complex technique, potentially changing practice without evidence. It is heartening to see these authors trial such a complex technique, allaying any doubt or medicolegal concerns over those choosing to use the tried and tested fluoroscopic approach.

Distal radius stirring up trouble again!

x-ref Trauma

■ As we all (surgeons, politicians and patients alike) 'go for gold' in the constant battle for a perfectly reproducible perfect outcome, increasingly interventional treatments have been chosen over conservative options. In many injuries the discernible benefit is a quicker return to function, but with increasing operative and metalwork-related complications as a drawback.⁷ Clinical trialists from **Oslo (Norway)** have been following up their randomised controlled trial of 'external fixation' which, in their hands, included K-wires versus volar plating for over five years, and have now reported the mid-term results. Their study included the outcomes of over 100 patients randomised to each treatment, with 91 patients available for five-year

review. At the five-year point there were no differences in QuickDASH outcomes, although subjective measures (including a range of motion and radiological parameters) favour the volar locking plate. For the moment, at least, it seems all treatments are equal in the eyes of the DASH score!

Scaphoid arthroscopy under the spotlight

■ In a bumper month for the arthroscopic-assisted hand and wrist trauma RCTs, here at 360 our beady eyes were caught by another such RCT with long-term follow-up. Industrious surgeons in **Lund (Sweden)** report their own randomised study designed to evaluate the efficacy of conservative treatment *versus* arthroscopic-assisted scaphoid fixation. The study cohort consisted of 35 patients, all presenting with

minimally displaced or undisplaced fractures of the scaphoid. Curiously for a randomised trial, there was a complete failure of randomisation with 21 conservatively treated patients and 14 treated with arthroscopic screw fixation.⁸ Outcomes were assessed at a minimum of four years follow-up, including radiographic and range of motion measurements. The fixation group had a slightly better outcome at 14 weeks, but by 26 weeks the conservative group had overtaken the fixation group. By one year post-injury, there were no differences in range of motion or nonunion rate but there was a slight increase in radiographic arthrosis in the surgical group. So for this initial faster recovery, there is a payback of marginally higher arthroses rates. The cynically minded reader may wonder, with just 14 patients

in one group and a clear failure of randomisation, if indeed anything can be drawn from this study at all?

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Shoulder & Elbow

For other Roundups in this issue that cross-reference with *Shoulder & Elbow* see: **Paeds Roundup 2, 4; Research Roundup 1, 2, 3, 4, 6.**

Culture time important in propionibacterium acnes x-ref Research

■ Infection complications of shoulder surgery are particularly difficult to treat. The most common of these is *propionibacterium acnes*, which is known to colonise the axilla and has been implicated in particularly difficult to treat insidious infections in shoulder arthroplasty. It is known that positive culture rates for *P. acnes* increase with the duration of culture growth, however, it is particularly difficult to culture. The procedure of extended incubation can run the risk of course of lowering specificity.¹ Researchers in **Cleveland (USA)** have set out to establish the diagnostic accuracy of culture, based on time to culture. The researchers

hypothesised that early growth might be more significant than later culture. The study team retrospectively reviewed the results of 46 patients, all of whom had presented to their unit with cultures of *P. acnes*, from fluid or tissue taken during revision shoulder arthroplasty. Although gold standards are hard to achieve in this sort of study, the researchers divided their group into probable true positives and probable false positives based on the subsequent clinical course, operative findings and culture results. The chief finding of this study was that in the 37 probable true positive group, the time to culture was significantly shorter (median five days) in comparison with the probable contaminant group cultures, which were positive after 11 days. This study demonstrates that in the case of *P. acnes* cultures, the shorter the time to growth and the higher the proportion of positive

cultures, the higher the likelihood of a true positive infection. The number to hang your hat on looks to be 11 days, with no true positive cultures turning positive after this point.

Microvascularisation of the cuff footprint x-ref Research

■ It is a commonly held orthopaedic belief that vascularisation is key to healing in a range of orthopaedic conditions and interventions. The rotator cuff is no different, and it is believed that the microvascularisation of the rotator cuff tendons is a key determinant in healing of the cuff, both post-tear and post-surgery. Researchers in **Toulouse (France)** considered, not unreasonably, that it may be vascularisation of the bone as much as anything that is responsible for the healing of cuff injuries. In one of those deceptively simple hybrid clinical and basic science studies, the research team followed up 48 patients

over a 12-month period who had previously undergone a single-row rotator cuff repair and a full-thickness core biopsy. The cores underwent an immunofluorescent study with staining for anti-CD34 antibodies. The results were correlated with clinical outcomes at 12 months of follow-up. Clinical outcomes included ultrasound (with Sugaya's classification), Constant and ASES scores.² As would perhaps be expected, the whole cohort improved in their clinical outcomes, and the research team divided patients according to Sugaya subtypes. It was demonstrated that there was a decreasing rate of microvascularisation for increasing Sugaya classification. Microvascularisation of the rotator cuff tendon is commonly considered as a biological determinant of healing potential, and this study demonstrates that the bone microvascularisation may also play a previously unrecognised role