suitable for surgical wounds, even arthroscopically. The posterior ankle portal is rarely used in routine ankle arthroscopy due to perceived technical difficulty and the risk of iatrogenic injury to neurovascular and tendinous structures. The group from CHU in **Rouen (France)** present a feasibility study for arthroscopic ankle arthrodesis using an entirely posterior approach to the joint.[8] Ten cadaveric specimens underwent fusion and were dissected afterwards to look for injury to structures around the ankle. None is reported in this small series, with an average operative time of 45 minutes. Operating in the real-life setting will inevitably be more time-consuming, but this study nicely demonstrates the feasibility of this method, to prepare the ankle via the posterior approach if needs be.

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Wrist & Hand

X-ref ***For other Roundups in this issue that cross-reference with Wrist & Hand see:*** *Oncology Roundup 3; Paeds Roundup 5.*

The occult scaphoid fracture: a costly diagnosis?

Sometimes in life, one has to spend more to save in the longer term. This is one of the central dogmas of evaluation of screening tests, which is essentially what the use of advanced imaging modalities is when applied to scaphoid fractures in patients with a suggestive history. The question of course is, does early imaging work from a cost-effectiveness perspective? In a very useful cost-effectiveness analysis, researchers in **New York (USA)** have set out to determine if use of cross-sectional imaging is justified in patients at risk of a scaphoid fracture.[1] As has become the gold standard in recent years, this analysis is not based on a series of patients and retrospective 'bean counting', but a more elegant computational approach. The investigators used previously published data to generate a decision analysis model. The model was able to take into account three possible management strategies: empirical cast management, immediate CT or MRI scanning. The investigators used published data concerning costings, incidence of fracture diagnosis by each modality and the surgical and societal costs of missed fractures using each strategy. Using this decision model, cross-sectional imaging had a 'break even' point for cost effectiveness of $2000 per patient. Given that the cost in many institutions is around $500 for MRI and less for CT, the use of early cross-sectional imaging is wholly appropriate from a health-economic perspective.

Kienbock's an enigmatic disease

Kienbock's disease is an enigma, even to the hand surgeon! The cause is not really known and the best treatment has not been established. Even worse, we do not really know its clinical relevance. Researchers from **Boston (USA)** have designed a radiographic review to establish the prevalence of Kienbock's disease.[2] The researchers undertook a retrospective imaging review (using reporting) of over 51 000 radiographs and scans and found Kienbock's disease in 0.27% of imaging studies. In these cases the radiographs and clinical notes were reviewed, establishing an overall prevalence of 0.10% asymptomatic and 0.17% symptomatic disease in the general population. Within the limits of the retrospective nature of the study design, the authors were unable to establish a relationship between symptoms and Lichtman stage, reminding us that it is wise, as very often in orthopaedics, to consider the patients, not the radiograph.

Warfarin and hand surgery

Knowing how to manage perioperative anticoagulation can be tricky. Patients may take warfarin for various reasons and while sometimes it can be stopped safely and temporarily before surgery, at other times even temporary cessation can be life threatening. It is therefore important to balance the medical risks of curtailing warfarin with the surgical risks of continuing (for example haematoma, infection). Researchers from **St Louis (USA)** undertook a matched cohort study to try and establish the balance of risks with simply continuing warfarin prior to hand surgery.[3] They undertook a matched case series with 50 hand surgery patients who continued pre-operative warfarin with 50 age-/procedure-matched controls who were normal. Outcomes were assessed in terms of peri-operative complications, and established using a retrospective chart review in addition to DASH and pain/swelling VAS scores. The authors determined that there was a significant increase in the risk of haematoma formation in those patients taking warfarin, although the requirement for re-operation was very unusual. Caution and proper risk assessment remains essential for those on powerful anticoagulants who are in need of hand surgery.

Predicting recurrence following injection for carpal tunnel syndrome

Surgeons like to operate and carpal tunnel release is probably the most common operation that hand surgeons perform. But do patients always need surgery? A group in **Boston (USA)** and **San Francisco (USA)** report their outcomes having injected 49 patients' symptomatic carpal tunnels with steroid.[4] A comprehensive patient history and demographic information were collated prior to administration of the injection, and outcome scores were reported at regular intervals until 12 months of follow-up, primarily using the Boston Carpal Tunnel Questionnaire. The headline result was that 31% of patients were still symptom-free at 12 months, however, recurrence was 2.5 times more likely in diabetics. Although these results are not awe-inspiring in terms of recurrence rates, given the simple and complication-free nature of a single steroid injection when compared with carpal tunnel release, we wonder here at 360 if

surgeons should perhaps consider refraining from carpal tunnel release, at least in non-diabetics, unless a steroid injection has been tried.

Day case hand surgery: a blight on the emergency department?

It is unusual for orthopaedic surgeons (or any other service for that matter) to consider the impact that changes in practice may have on other sectors of health care. Researchers in **Boston (USA)** have studied the impact of day case hand surgery and the factors that, in light of a changing healthcare economy, may be associated with a return trip to the emergency room.[5] The study population consisted of 2332 patients operated on over a four-year period and undergoing either carpal tunnel decompression or trigger finger release. The team collated a range of pre- and peri-operative variables in an attempt to establish which factors were associated with ED visits following surgery. Overall, 3% (n = 67) of their cohort had to visit ED following surgery, the majority within two weeks and a third requiring admission. Patients were more likely to visit ED when they had poor social support or higher rates of comorbidity. A range of problems triggered the visits, with wound complications making up just 16%, and pain 18%, of assessments. This is clearly a complex problem and with healthcare funders noting ED attendance as a quality indicator, the reasons for re-attendance need to be understood in order to develop pathways and education strategies to provide necessary after-care without burdening the emergency department.

Measuring outcomes in CMCJ arthritis

Patient-reported outcome scores are more and more important. Gone are the days of reporting 20 patients having a particular outcome, assessing them yourself and declaring '100% good or excellent results'. Patients, healthcare funders, commissioners, research funders and journal editors want properly validated patient-reported outcome scores with which to decide the best treatments, evaluate new therapies and quantify the health economic impact of both treatment and disease. Whil global health and wellbeing scores are used extensively, often they are insensitive to disease-specific problems, and as such there is still very much a place for joint- or disease-specific scores. Researchers in **New York (USA)**, noting that no such score exists for base of thumb arthritis despite the treatment challenge it poses and the wealth of opposing interventions and views, sought to fill this gap in the literature.[6]In a simple but potentially important study, the research team set out to develop an expectation-based, self-administered survey to establish what the important expectations are in patients with osteoarthritis of the thumb. During an initial exploratory phase the research team conducted 42 qualitative interviews with patients, all presenting with carpometacarpal arthritis. The research team then developed a survey based on their responses, and in the second stage of the study undertook a test-retest of the score to clinically validate the survey. The authors were able to identify 256 characteristic expectations in 21 categories which were reduced to a 19-item single-page survey. The second phase of the study identified that the score was reliable and had high levels of concordance, internal consistency and interrater reliability. We would agree with the authors here that their survey provides a reliable tool that can be used to record patients' expectations and their fulfilment following surgery or other treatments to the base of the thumb.

Outcome scores in the hand in general

It is not (as we all know) enough to establish that there is a difference between groups when conducting a study - it is essential to know if that difference matters to the patients, i.e. whether it is clinically important. One of the difficulties with implementing this approach is that different scores all have different minimum clinically important differences (MCIDs) with each different condition. A study team from **Nottingham (UK)** have undertaken the colossal task of reviewing all the available literature concerning hand outcomes.[7] Their review covers 29 articles, identifies 99 MCIDs reported and evaluates the methods through which the estimates have been reached. This is an essential article for all those planning studies on the hand in future, and makes for a useful '*aide memoire*' when reading and evaluating others' research. We would thoroughly recommend it to *360* readers.

Productivity and healthcare costs

Sticking with outcomes and osteoarthritis in the base of the thumb, we would draw readers' attention to an interesting study from **Zurich (Switzerland)** which aimed to quantify both direct healthcare costs and loss of productivity (general economic costs) in the treatment of patients with trapezio-metacarpal osteoarthritis.[8] Their study was a prospective evaluation using the Work, Productivity and Activity Impairment Questionnaire with outcomes assessed between baseline and 12 months following diagnosis. The patients were not randomised to treatment, but the differences between the two cohorts were reported. Interestingly, from a wider economic perspective those patients undergoing surgery actually had a greater impact on their economic productivity, with total annual healthcare and productivity costs reaching around €5500 each, significantly higher than the injection group. The authors make the valid point that more economic studies should assess the wider societal costs, not just direct health economic costs associated with treatments.

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