

# ROUNDUP<sup>360</sup>

## Shoulder & Elbow

### Katakori in Japan

■ Katakori is a Japanese word that refers to a stiff neck and shoulders and is said to be extremely common in Japan. There are many different theories as to why that nation is so smitten. However, its full characteristics have not been well documented to date, so a paper from **Maebashi (Japan)** is interesting. The authors' aim was to clarify the characteristics of katakori through a questionnaire survey of 393 members of the hospital's nursing staff. The prevalence of katakori was an astonishing 68.1%. The condition was more frequent in subjects with psychological stress, elbow/wrist pain, lumbar pain, and knee pain. The most common co-existing symptom was headache, which was present in 58.9%.<sup>1</sup> These figures astonished 360. Katakori is clearly a very prevalent problem in Japanese nursing staff and appears still to be incompletely understood.

### Frozen shoulder – is it worth treating?

■ Frozen shoulder is extraordinarily common and there is continuing debate about its outcome. Many claim that complete resolution is not assured. As a result, work from **Helsinki (Finland)** is useful. Although a level IV study the authors wished to determine the length of symptoms, whether spontaneous frozen shoulder recovered without any treatment, and whether any restoration of movement, pain

relief, and function persisted over the long term. To do this, the team retrospectively reviewed 83 patients treated for frozen shoulder at a mean of nine years after the initial consultation. Of the 83 patients, 51 were treated with observation only (untreated group), 32 had received some kind of nonoperative treatment before their first consultation (nonoperative group). The authors also evaluated 20 patients who received a manipulation under anaesthetic (manipulation group). The disease lasted for a mean of 15 months in the untreated group, and 20 months in the nonoperative group. At last follow-up the range of movement had improved to the contralateral level in 94% of the untreated group, 91% of the nonoperative group, and 91% of the manipulation group. In the untreated group 51% of the patients were free of pain, although this was 44% for the nonoperative group and 30% for the manipulation group.<sup>2</sup> 360 was pleased by this paper as it is clear that conservative management is a viable option for frozen shoulder. It seems that 94% of patients can recover to normal levels of function and movement without treatment.

### Does shoulder impingement actually exist?

■ Sometimes a paper appears which questions true orthopaedic dogma. One such paper is that from **Seattle (USA)**. For example, acromioplasty for impingement syndrome of the shoulder is a common orthopaedic procedure. The

rate with which it is performed has increased dramatically in recent years. However, the authors of this paper wished to establish high levels of evidence in the published literature related to five hypotheses: (1) clinical signs and tests can reliably differentiate the so-called impingement syndrome from other conditions, (2) clinically common forms of rotator cuff abnormality are caused by contact with the coracoacromial arch, (3) contact between the coracoacromial arch and the rotator cuff does not occur in normal shoulders, (4) spurs seen on the anterior aspect of the acromion extend beyond the coracoacromial ligament and encroach on the underlying rotator cuff, and (5) successful treatment of the impingement syndrome requires surgical alteration of the acromion and/or coracoacromial arch. Three of the authors independently reviewed each article, papers with level-III or -IV evidence being excluded. The results were simple; high levels of evidence supported none of the hypotheses. As the authors say, the concept of impingement was originally introduced to cover the full range of rotator cuff disorders, as it was recognised that rotator cuff tendinosis, partial tears and complete tears could not be reliably differentiated on the basis of clinical signs alone. However, the current availability of ultrasound, MRI, and arthroscopy now enables these conditions to be accurately differentiated.<sup>3</sup> Future clinical investigations can now focus on the indications for and outcome

of treatments for the specific rotator cuff diagnoses rather than using the generic term of 'impingement'. 360 has but one question, which perhaps someone can answer. Faced with this evidence, does impingement in the shoulder truly exist at all?

### Shoulder arthroscopy and suprascapular nerve blocks

■ Decent pain relief after arthroscopic shoulder surgery is key to the outcome of so many shoulder procedures, with surgeons from **Innsbruck (Austria)** reporting on arthroscopic subacromial decompression. They undertook a randomised study into the effects of a suprascapular nerve block on patient satisfaction and outcome. In this prospective, randomised, double-blinded clinical trial, three groups of patients, 45 in total, were treated with a suprascapular nerve block, placebo, or a subacromial infiltration of local anaesthetic. Pre- and post-operative pain was measured, as were functional outcome and patient satisfaction, at two days, two weeks, and six weeks after surgery. It appears the suprascapular nerve block did the trick. Patients who received it reported lower levels of post-operative pain, required less analgesia, had a better range of movement, and demonstrated higher levels of post-operative satisfaction in comparison with those who had received subacromial infiltration or placebo.<sup>4</sup> So what about when 360 has its own subacromial decompression? A suprascapular nerve block, please.

## Why shoulder replacements fail

■ What is it that might cause a total shoulder replacement to fail? Surgeons from **Birmingham and Rochester (USA)** have looked at 2588 shoulders over 30 years with the objective of establishing the rate of revision, and its predictive factors, in patients undergoing total shoulder replacement. They used prospectively collected data from the Mayo Clinic Total Joint Registry to examine five-, ten- and 20-year revision-free survival after shoulder replacement and any predictive factors. In total, they found 2207 patients with 2588 shoulder replacements. Their mean age was 65 years and 1163 (53%) were women. Osteoarthritis was the underlying diagnosis in 1640 shoulders (63%). In all, 1212 total shoulder replacements (8.2%) were revised during the follow-up period. At five, ten and 20 years, survival rates were 94.2%, 90.2%, and 81.4%, respectively. Men had a higher hazard ratio of revision of 1.72 compared with women, and those with rotator cuff disease had a hazard ratio of 4.71 compared with patients who had rheumatoid arthritis.<sup>5</sup> 360 notes the conclusion that male gender and rotator cuff disease are independent risk factors for revision after total shoulder replacement. Future studies are clearly needed to understand the biological rationale for these differences.

## The infected elbow replacement

■ An infected joint replacement is a potential disaster and the elbow is no exception. A report from a team in **Zurich (Switzerland)** is thus to be welcomed. The researchers wished to investigate the outcome of different surgical procedures (debridement and retention *versus* one- or two-stage exchange) together with a well-defined antimicrobial regimen. They looked at 236 consecutive patients who underwent 262 elbow replacements over a 13-year period. From this group they found 20 episodes of prosthetic infection in 19 patients and placed

them into three groups according to how long after index surgery the infection occurred. There were nine early infections (< 3 months), one delayed (3 to 24 months), and ten late (> 24 months).

The treatment among these three groups was compared and the outcome assessed; mean follow-up was 60.2 months. In the group with early infections eight cases were treated by irrigation and debridement and one by a two-stage exchange. There was no recurrence of infection. The one delayed infection was treated by one-stage exchange, again without recurrence of infection. For the late infections, the situation was different as three had a recurrence of infection after debridement and irrigation. Eradication of the infection was achieved by staged revision and, in three cases, by debridement.<sup>6</sup> 360 feels the authors' conclusion is helpful, as they state that both debridement with retention and staged re-implantation are highly successful procedures in this scenario. However, staged revisions are successful even against biofilm-active micro-organisms, although a prosthesis-free interval of at least three months is recommended.

## The four-part fracture – leave it alone or hemiarthroplasty?

■ A continuing debate is how best to treat the displaced four-part fracture of the proximal humerus; nonoperatively or hemiarthroplasty? Some good work has come out of **Stockholm (Sweden)** in this respect. Here, researchers looked at the two-year outcome after a displaced four-part fracture of the proximal humerus in elderly patients randomised to treatment with a hemiarthroplasty or nonoperative treatment. They included 55 patients, with a mean age of 77 years, 86% being women, and followed them up for four, 12 and 24 months. At the final follow-up the quality of life was significantly

better in the hemiarthroplasty group compared with those treated non-operatively; pain assessment also supported hemiarthroplasty. Both groups achieved a mean flexion of



approximately 90° to 95° and a mean abduction of 85° to 90°. The need for additional surgery was low, being required by three patients in the hemiarthroplasty group and one in the nonoperative group. This study demonstrates a significant advantage in quality of life for those patients who received a hemiarthroplasty for their four-part fracture of the proximal humerus. These patients also seemed to experience less pain although there were no differences in range of movement.<sup>7</sup> Hemiarthroplasty seems to win, notes 360.

## The acromion index – it works for Brazil but not for Japan

■ The acromion index is a lateral tilt of the acromion that is thought to relate to the development of a rotator cuff tear. Surgeons from **São Paulo (Brazil)** have looked at the significance of this index in two different populations, Brazilian and Japanese. The team compared 83 Brazilian adults (mean age, 54 years) with rotator cuff tears with 28 individuals with intact rotator cuffs matched by gender, age and race. Similarly, 112 Japanese adults (mean age, 59 years) with rotator cuff tears were compared with 56 controls. The mean acromion index for the Brazilian patients with rotator cuff tears was 0.72; meanwhile, the result for the Japanese patients was 0.68. When patients with rotator cuff tears were compared with those with intact rotator cuffs, a statistically significant difference was found in Brazilians but

not in the Japanese.<sup>8</sup> It thus appears, notes 360, that the acromion index can be used as a predictive factor for rotator cuff tears in the Brazilian population but not in the Japanese.

## Arm transplantation

■ One way of taking shoulder and elbow surgery to an extreme is with whole arm transplantation, a procedure highlighted by a case report from **Trzebnica (Poland)**. Hand transplantation now represents a therapeutic alternative for amputees but arm transplantation poses a serious challenge. By the end of 2010, only seven such procedures had been performed in four patients. The authors of this article have presented the 14-month result of an arm transplant in a 30-year-old man. The patient had sustained an amputation at the level of the elbow joint at the age of two years. The post-transplantation course was complicated by one rejection episode and a cytomegalovirus infection. However, at 14 months the patient was doing well and regaining function. He was able to flex at the elbow joint, move his fingers, and had some feeling as far distally as the palm. The patient was satisfied with his transplantation, too.<sup>9</sup> Remarkable surgery, thinks 360. Our congratulations to Trzebnica's Subdepartment of Limb Replantation for what they have done.

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