



In this month's Question for Physiotherapists, Dr Kwan Yeoh addresses some of the unanswered questions from last year's Latest Orthopaedic Updates Lectures.

## **QUESTION 1 | What are the traumatic mechanisms that cause TFCC injury?**

Most commonly, these occur with a fall onto an outstretched hand with the wrist extended and pronated, or from a forceful rotation or distraction. Bear in mind that the TFCC is a stabiliser of the distal radioulnar joint (DRUJ) and ulnar side of the wrist, so forces that place a stress on these areas will tend to cause TFCC injuries.

## **QUESTION 2 | For a TFCC tear in conjunction with a distal radial fracture, how long after injury would you consider surgery if symptoms do not settle with non-operative management?**

The most important treatment at the time of injury is to assess stability of the DRUJ, as an unstable DRUJ requires early stabilisation. This may involve holding in a forearm rotation cast for a number of weeks, cross-pinning the distal ulna to the radius, or a formal repair of the DRUJ ligaments (generally the TFCC).

Assuming the DRUJ is stable, management is initially geared towards the fracture. Usually, there is some sort of cast or splint for 6 weeks, followed by mobilisation. By 3 months after injury, the patient should show signs of improvement of ulnar-sided wrist pain. The pain may not settle completely for several more months, but a trend towards improvement should be clear.

If there is continued ulnar-sided wrist pain without signs of improvement by 3 months, then I would consider surgery. The patient will require an MRI as well as up-to-date neutral rotation wrist X-rays to view the TFCC and associated structures.

## **QUESTION 3 | Should a patient with a long ulna but no symptoms have an ulnar shortening osteotomy to prevent the TFCC from wearing through and acquiring a Type II (chronic, degenerative) tear?**

This is a good question. We do occasionally see patients with a positive ulnar variance, where a standardised PA view X-ray of the wrist with the forearm held in neutral rotation shows the articular surface of the ulna to end more distal than the equivalent surface on the radius. Of course, there is some natural variability in ulnar length from person to person, but longer ulnas have been associated with Type II TFCC tears.

When considering any intervention, the benefits must be weighed against the risk of complications. This risk/benefit ratio must be determined for both the operative and non-operative paths, and then compared.

In this situation, the risk of *not operating* is a TFCC tear, but we know that these can be treated with an ulnar shortening once the tear has developed. That is, the operation is essentially the same whether the tear has developed or not.

The risk of *operating* on the asymptomatic patient is low, but not zero. In the worst case scenario, the patient could end up with a non-union, CRPS, a permanently stiff wrist, or an infection. Conversely, the benefit of operating is also very low, given that the operation as stated is aimed at preventing a condition which is treated by the same operation anyway, without any proven difference in final outcome.

Therefore, to perform an operation on an asymptomatic patient, one has to take into account the risk of creating a potentially-serious symptomatic problem in a patient who was symptom-free prior to the operation. The benefit of the operation in this case does not justify the risk.

**QUESTION 4 | Can a degenerative TFCC tear develop in a patient with a neutral ulnar variance? Is this patient still suitable for an ulnar shortening osteotomy?**

Yes, these tears can still develop, but are less common. Usually, I would not shorten these patients, as there is a risk of damaging or destabilising the distal radioulnar joint (DRUJ) in such a procedure. My preference would be to perform an arthroscopic TFCC debridement.