

TFCC TEARS

Triangular fibrocartilage complex tears are the most common source of ulnar-sided wrist pain, and are either traumatic or degenerative in origin.

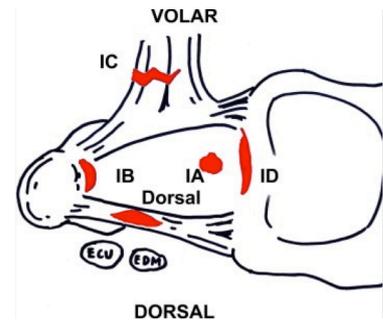
Traumatic tears can occur with an axial load against an extended and ulnarly deviated wrist or at the forced extremes of forearm rotation with an axial load.

The most common physical exam finding is foveal tenderness.

Palmer

Class 1 traumatic tears can often be debrided or repaired

Class 2 degenerative tears are often associated with ulnocarpal impaction syndrome and require addressing the ulnar positive variance.



Class 1A tears

Are the most common traumatic TFCC injury.

There is a tear or perforation of the centre.

This slit is 2–3 mm medial to the radial attachment of the TFCC.

Class 1B tears

Represent traumatic avulsions of the TFCC from its insertion into the distal ulna.

These tears result in DRUJ instability and may or may not involve the ulna styloid.

Class 1B tears include peripheral TFCC tears in the vascular zone of the TFCC.

Class 1C tears

involve detachment of the TFCC from its distal attachment to the lunate.

These are rare, high-energy injuries that result in ulnocarpal instability and palmar translocation of the ulnar carpus.

Class 1D lesions

involve detachment of the TFCC from its radial attachment at the sigmoid notch.

These are far less common and are sometimes confused with class 1A lesions that leave a small rim of TFCC on the radial side.

Degenerative Class 2 tears result from chronic load to the ulnar side of the wrist as is seen in ulnocarpal impaction syndrome. These pathologic changes become progressively worse in the Palmer classification.

Class 2A lesions involve thinning and wear of the TFCC without perforation.

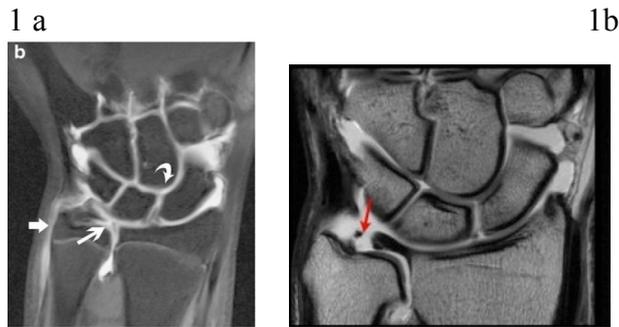
Class 2B lesions involve wear of the TFCC and chondromalacia of the ulnar aspect of the lunate or ulnar head, or both.

In class 2C lesions, the TFCC lesion progresses to a tear that is more ovoid rather than slit-like, as in the class 1A lesion.

Class 2D lesions include an LT ligament tear.

Class 2E lesions involve degenerative arthritis of the ulnocarpal joint.

MRI Classification



Treatment

Class 1A traumatic TFCC tear Simple rest and avoidance of painful activities may result in resolution of symptoms. A short arm cast and volar split immobilization have been shown to have equal results.

If patients remain symptomatic, corticosteroid injection can be beneficial. Sometimes may require arthroscopic debridement. The goal of arthroscopic debridement is to create a stable rim of TFCC. 80% G-E; if fails a subsequent ulnar shortening osteotomy regardless of ulnar variance may be required.

One should proceed with caution when performing arthroscopic debridement of any TFCC tear in an ulnar positive wrist. The recommended treatment would be an ulnocarpal unloading procedure with or without arthroscopic debridement.

Class 1B tears are peripheral tears in the vascular zone that may be amenable to repair. This can be accomplished by open or arthroscopic repair. Two types of repair can be performed: capsular and foveal. A capsular repair can be performed if the TFCC maintains a normal trampoline effect and if the DRUJ is stable. A foveal repair is recommended in patents



with loss of the normal trampoline effect of the TFCC and DRUJ instability.

Arthroscopic repairs to capsule can be performed via inside-out, outside-in, or all-inside techniques.

First making an ulnar incision and placing a curved repair device through the ulnar capsule and torn TFCC accomplish the outside-in repair. A wire loop retriever is used to pull the suture back through the ulnar capsule, allowing both limbs to be tied in the ulnar wound.

Careful protection of the dorsal sensory branch of the ulnar nerve is essential. The main branch of the dorsal ulnar sensory nerve can be exposed and protected as a precautionary measure.

Patients are initially immobilized in a long arm cast in supination for 4 to 6 weeks, with progressive increase in use over the course of 3 months.

Foveal repair involves attaching the TFCC back to bone. An incision over the fifth dorsal compartment to access the TFCC dorsally. The TFCC is repaired back via drill holes.

Tay recently described longitudinal tears of the ulnotriquetral ligament. Patients present with foveal tenderness. High-resolution MRI may show fluid accumulation in the substance of the ulnotriquetral ligament.

Repair is performed via an outside-in technique, closing the split in the ligament.