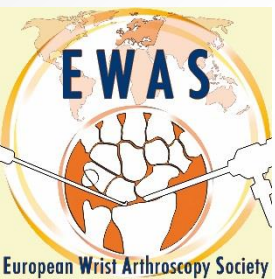


PROXIMAL AVULSION of RADIOCARPAL CAPSULE Parc Lesion: a new entity

Ch. Mathoulin



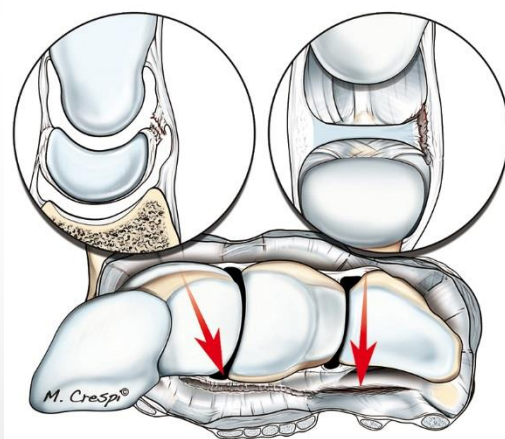
PARC LESION

Parc lesion is a large capsular tear of the dorsal wrist capsule, from TFCC to DCSS, often neglected in wrist arthroscopy and cause for persisting posttraumatic wrist pain.

This lesion probably results from a blunt trauma; however it also appears after a fall, often the wrist blocked in straight position.

Arthroscopic exploration often does not reveal any tear, due to coverage of the lesion by synovitis and/or fibrotic tissue, especially in chronic cases.

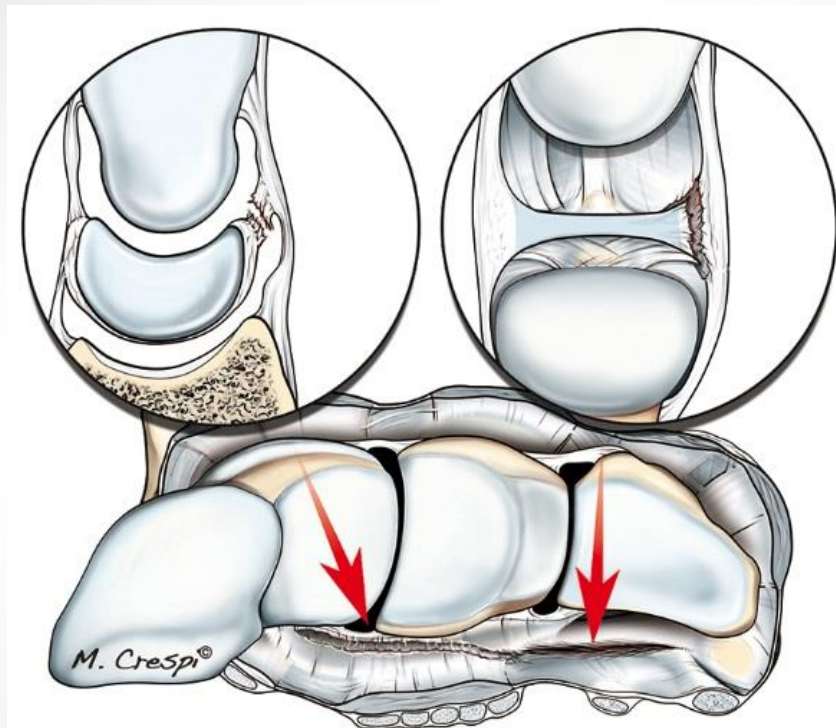
However, blunt debridement with the shaver reveals a detachment of the dorsal capsule.



PARC LESION

The trauma appears to create an avulsion tear of the dorsal wrist capsule at its insertion on the dorsal side of the TFCC, from styloid recessus until distal radius, and can expand into the DCCS (Dorsal Capsulo-Scapholunate Septum) in the direction of the second metacarpal.

Our proposal is to define this tear as a PARC lesion: Proximal Avulsion of Radiocarpal Capsule.



PARC LESION

Avulsion tear of the dorsal wrist capsule at its insertion on the dorsal side of the TFCC, from styloid recessus until distal radius.



PARC LESION

The avulsion tear of the dorsal wrist capsule expand into the DCCS (Dorsal Capsulo-Scapholunate Septum) in the direction of the second metacarpal.



Technique

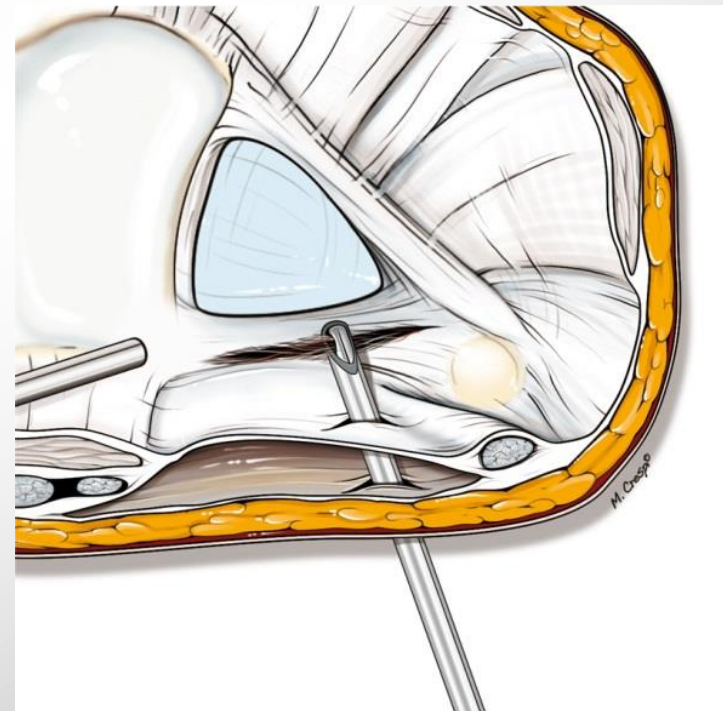
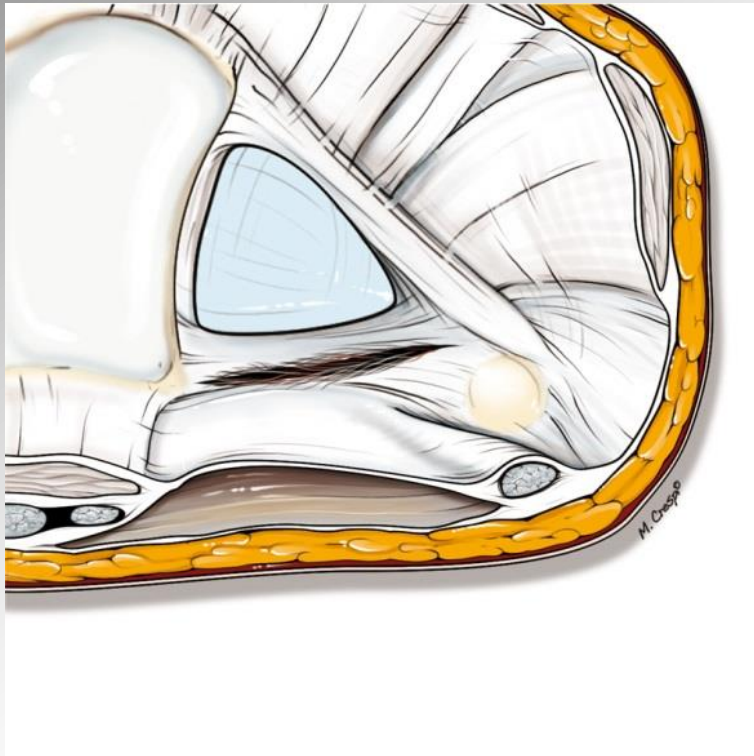
1st Step: TFCC Double loop

- Local-regional anaesthesia
- Tourniquet
- Outpatient surgery
- Elbow flexed 90°
- « Japanese » fingers traps
- 3-4 portal for vision
- 6R portal for instrumentation
- RUD portal for suture



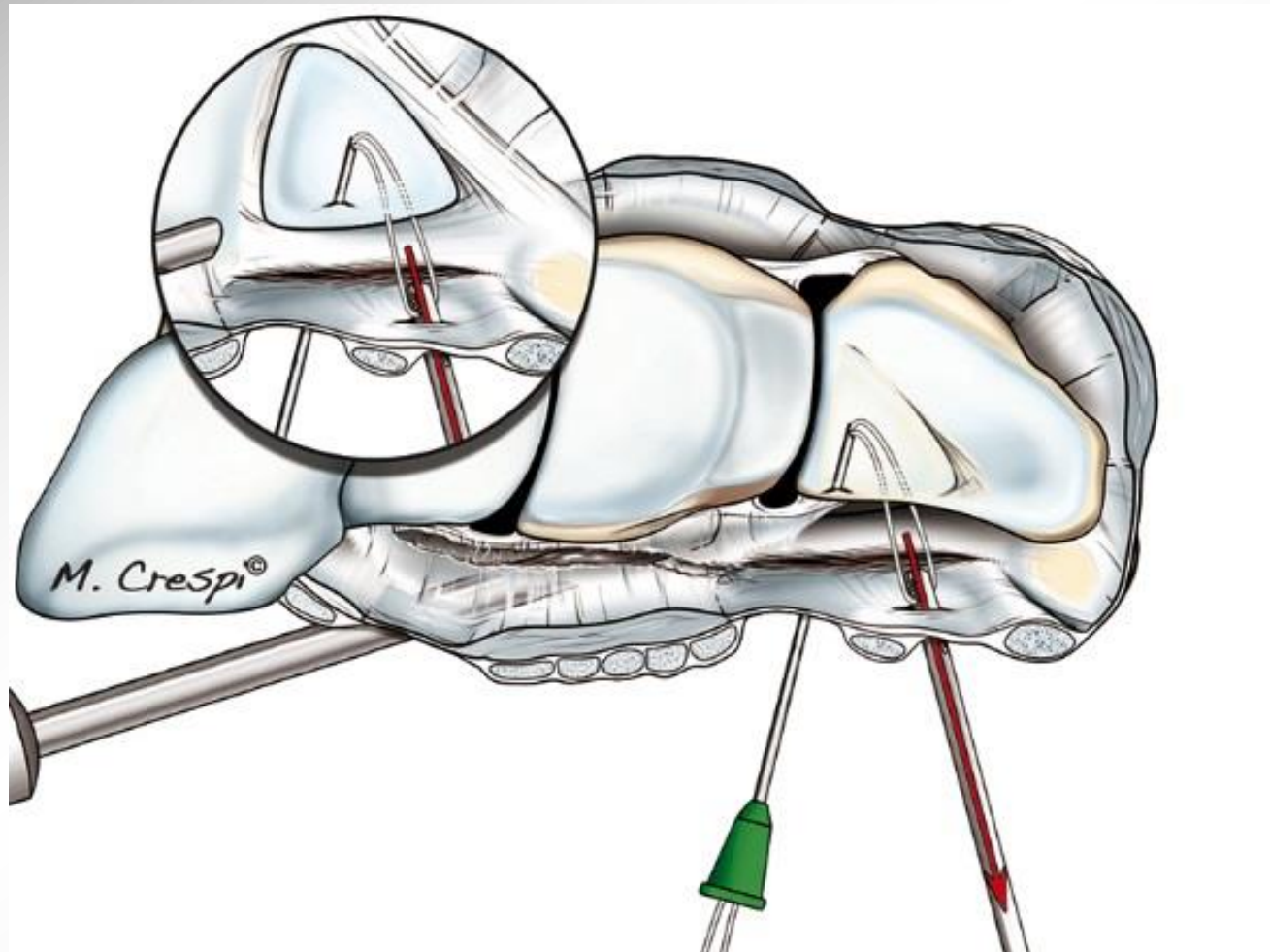
Technique

First Arthroscopic control and freshening of TFCC lesions



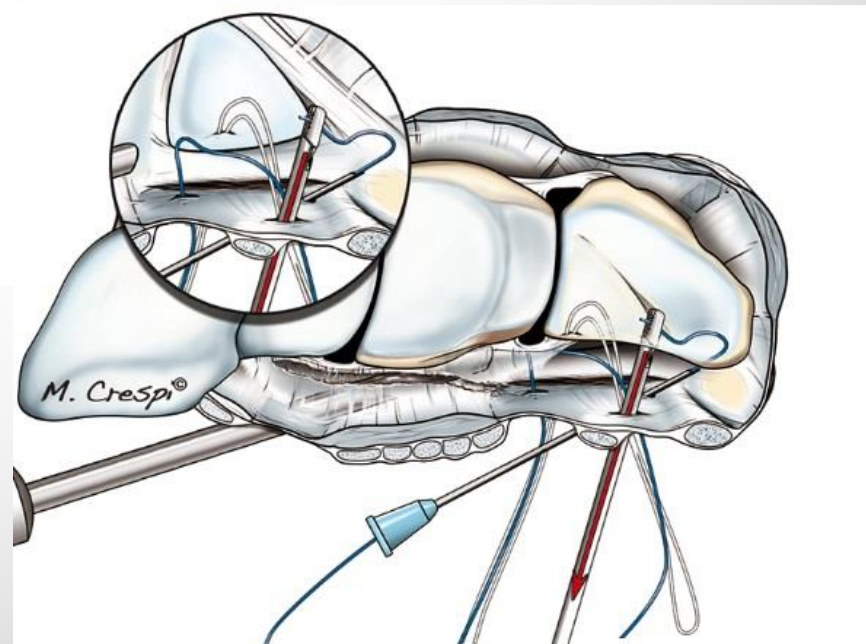
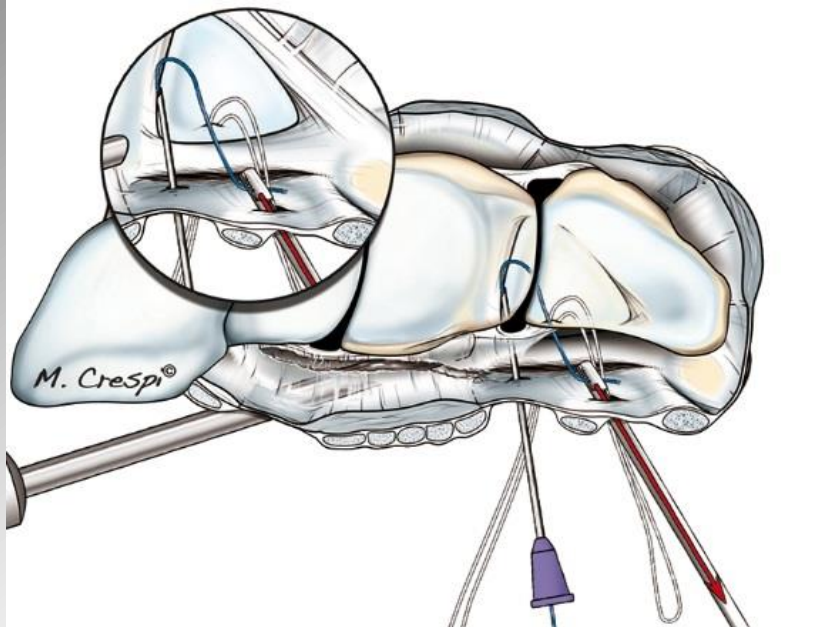
Technique

Passage of the central loop



Technique

Passage of the radial and ulnar sutures

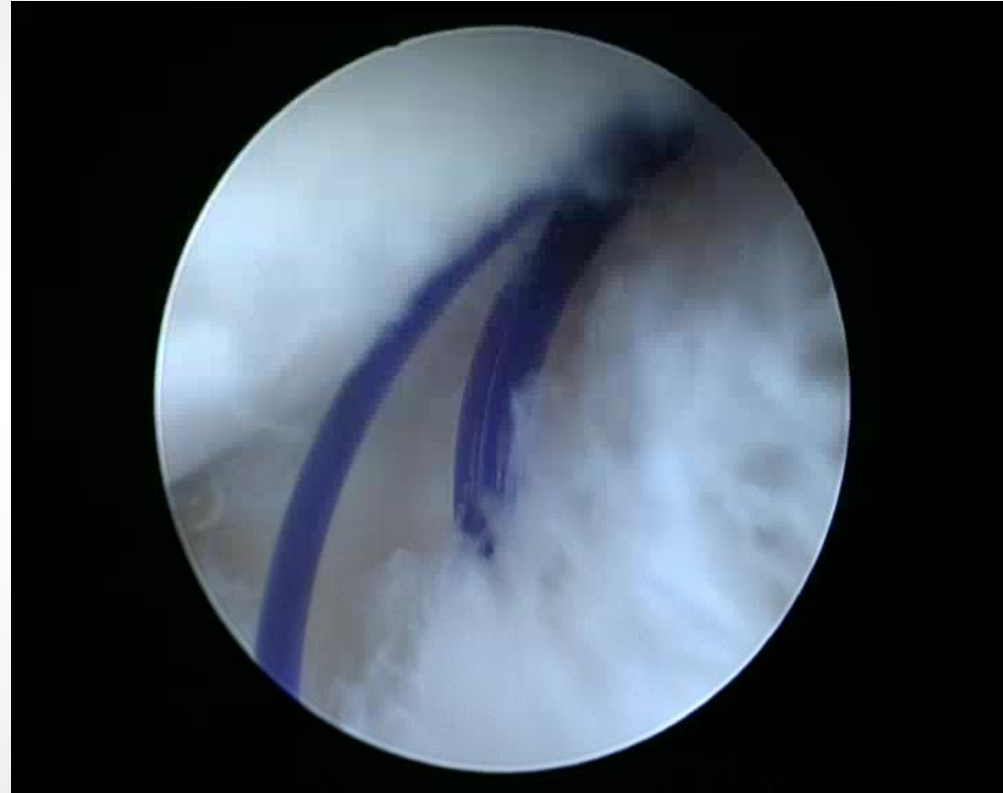
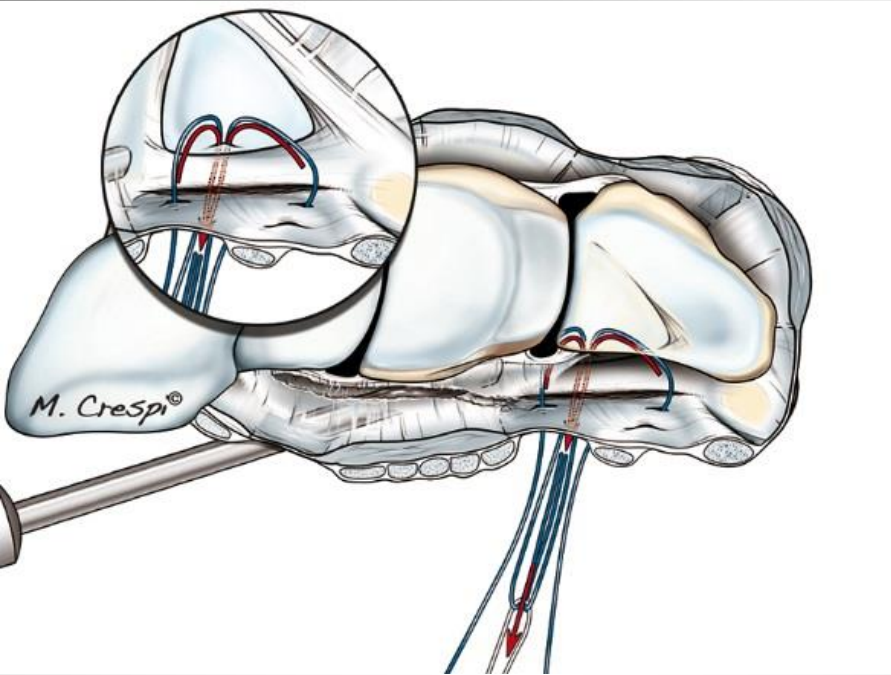


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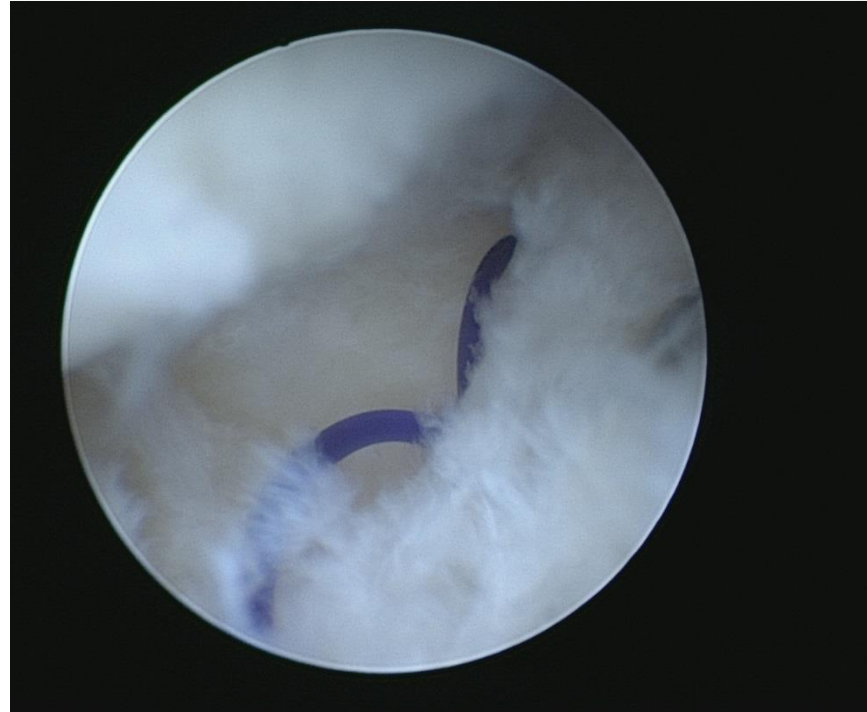
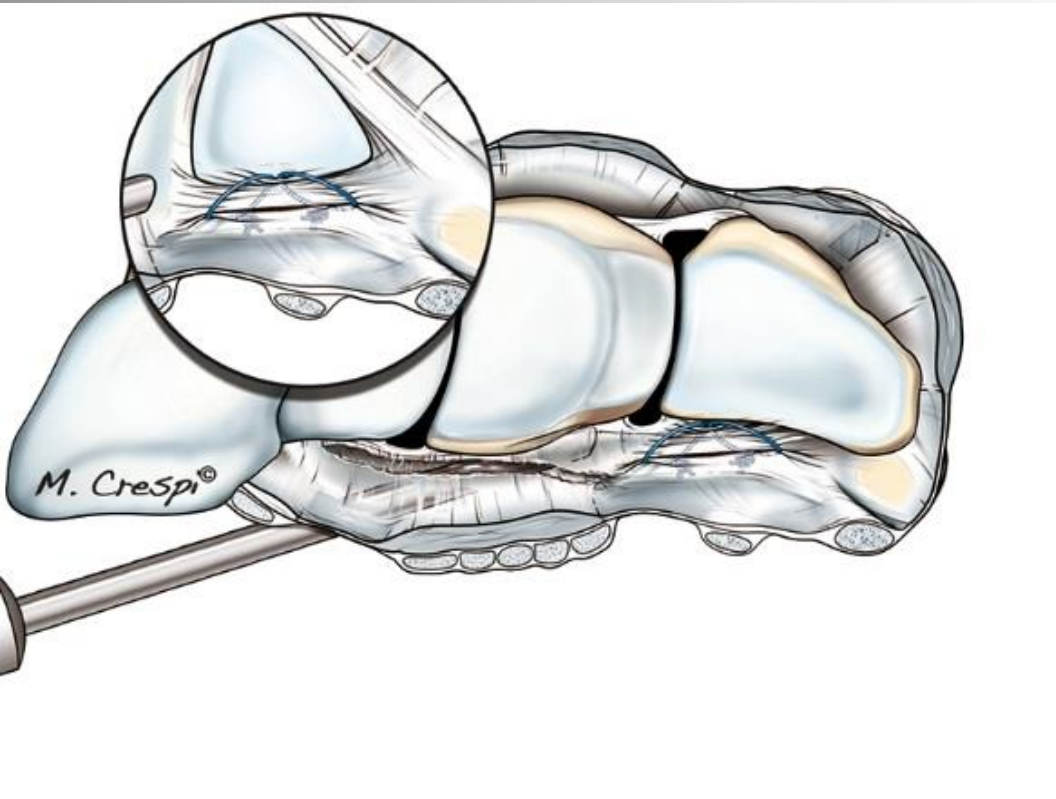
Technique

Final passage of double loop

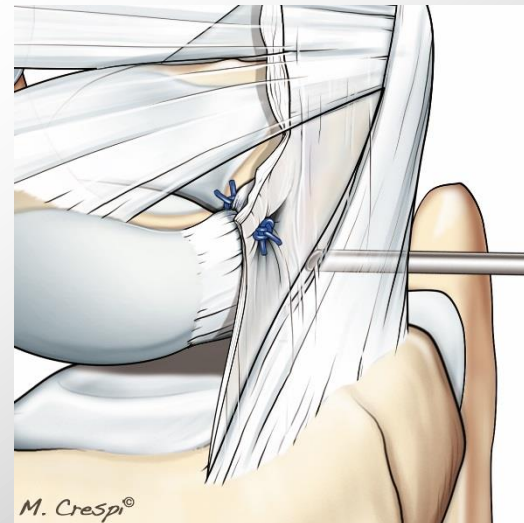
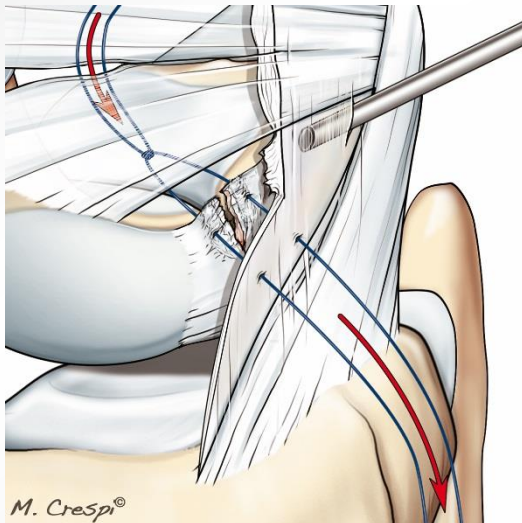
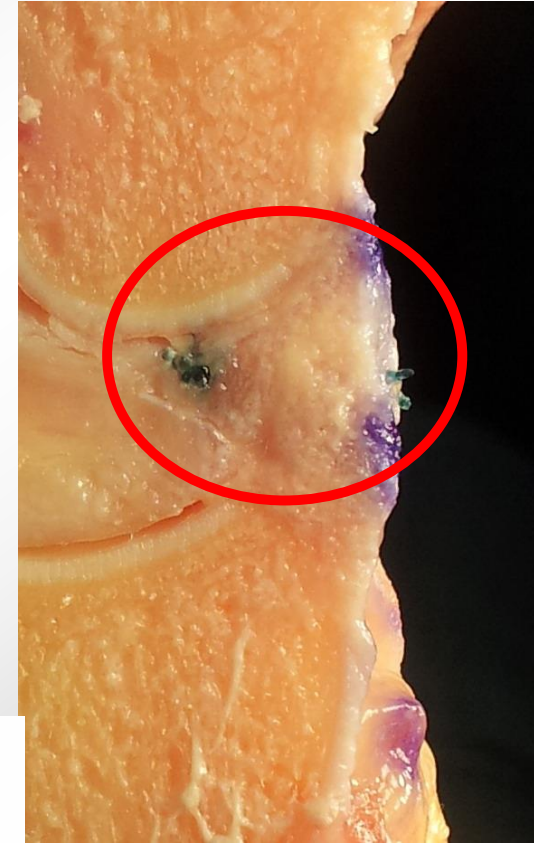
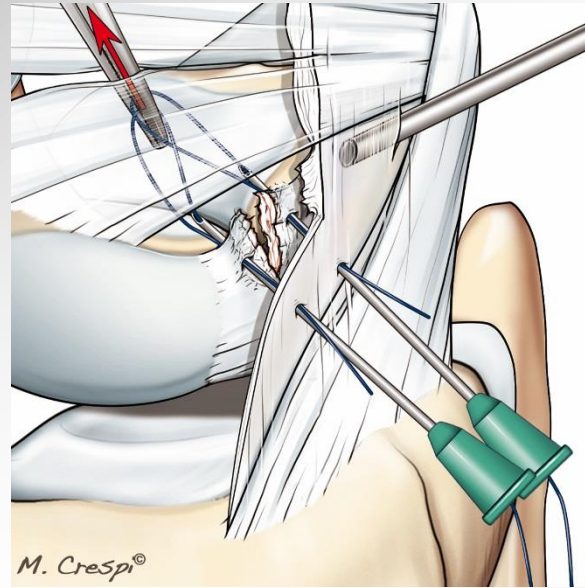
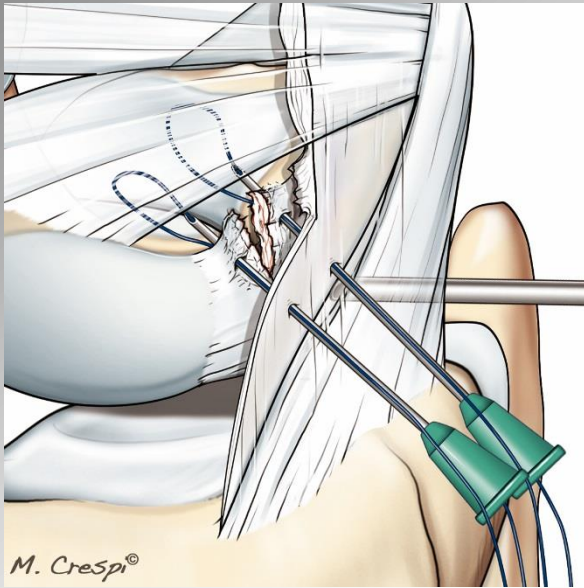


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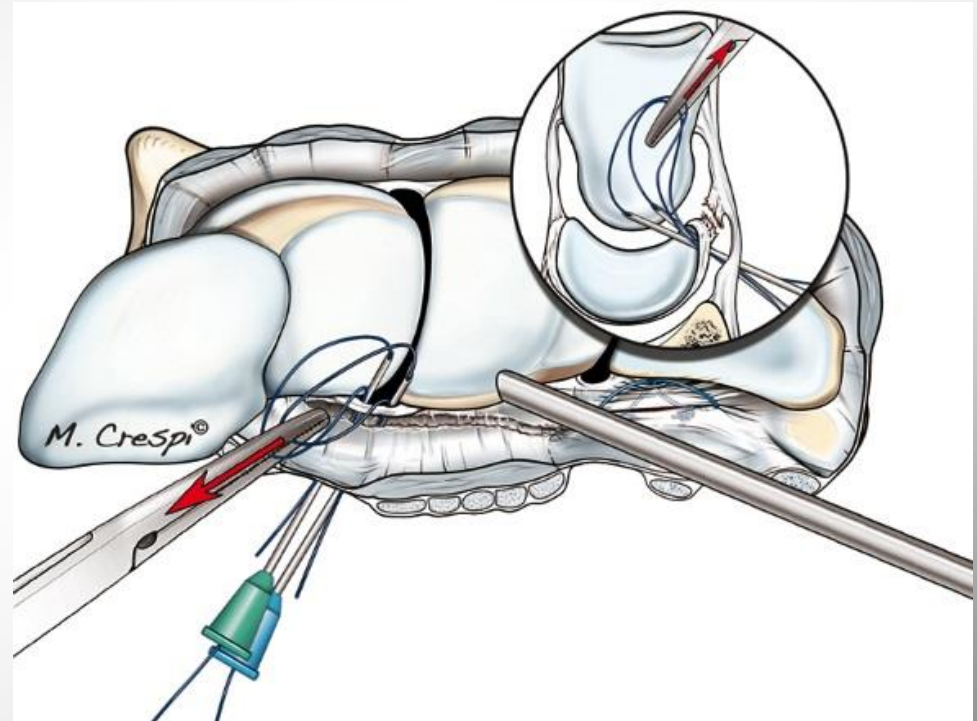
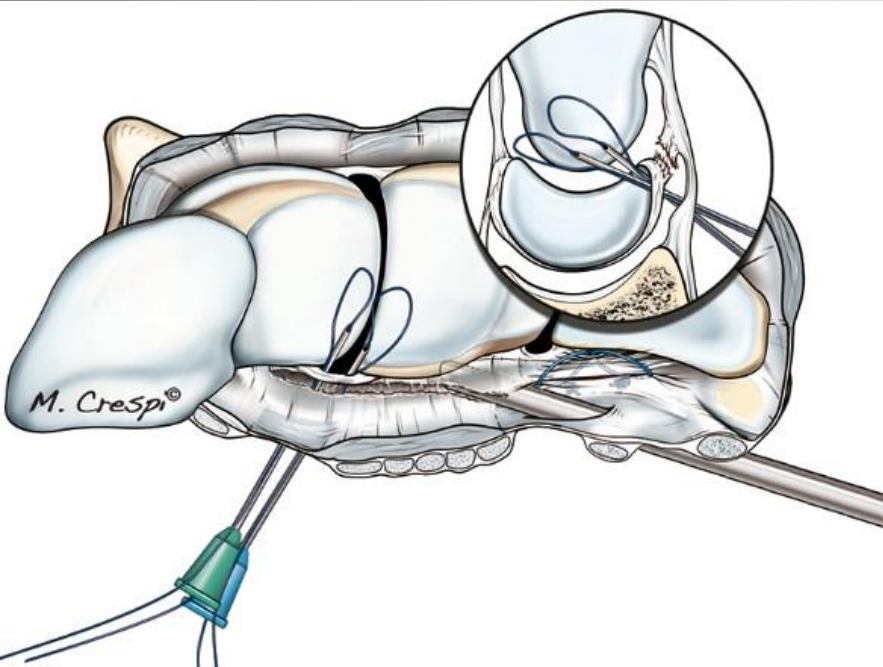
Final passage of double loop



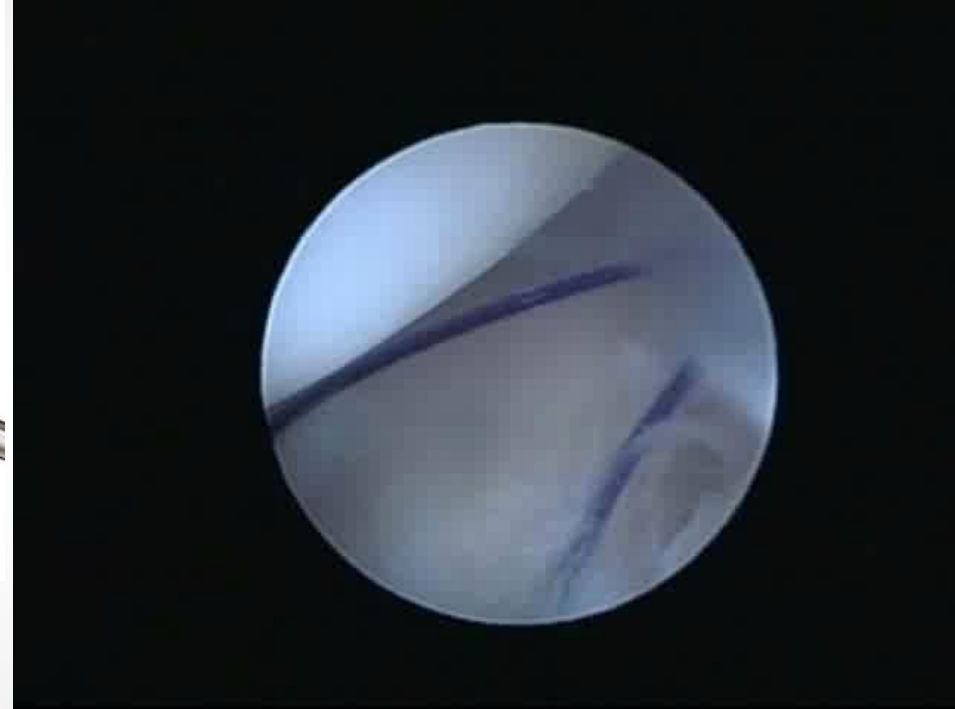
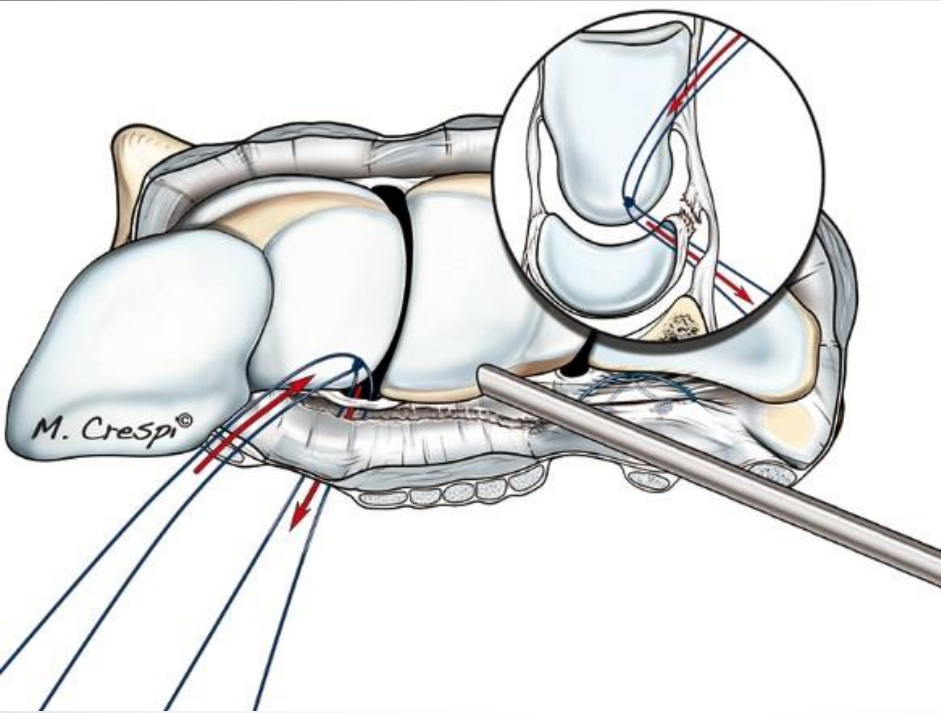
2nd Step Arthroscopic Dorsal Capsuloligamentous Repair ADCLR



Arthroscopic Dorsal Capsuloligamentous Repair ADCLR

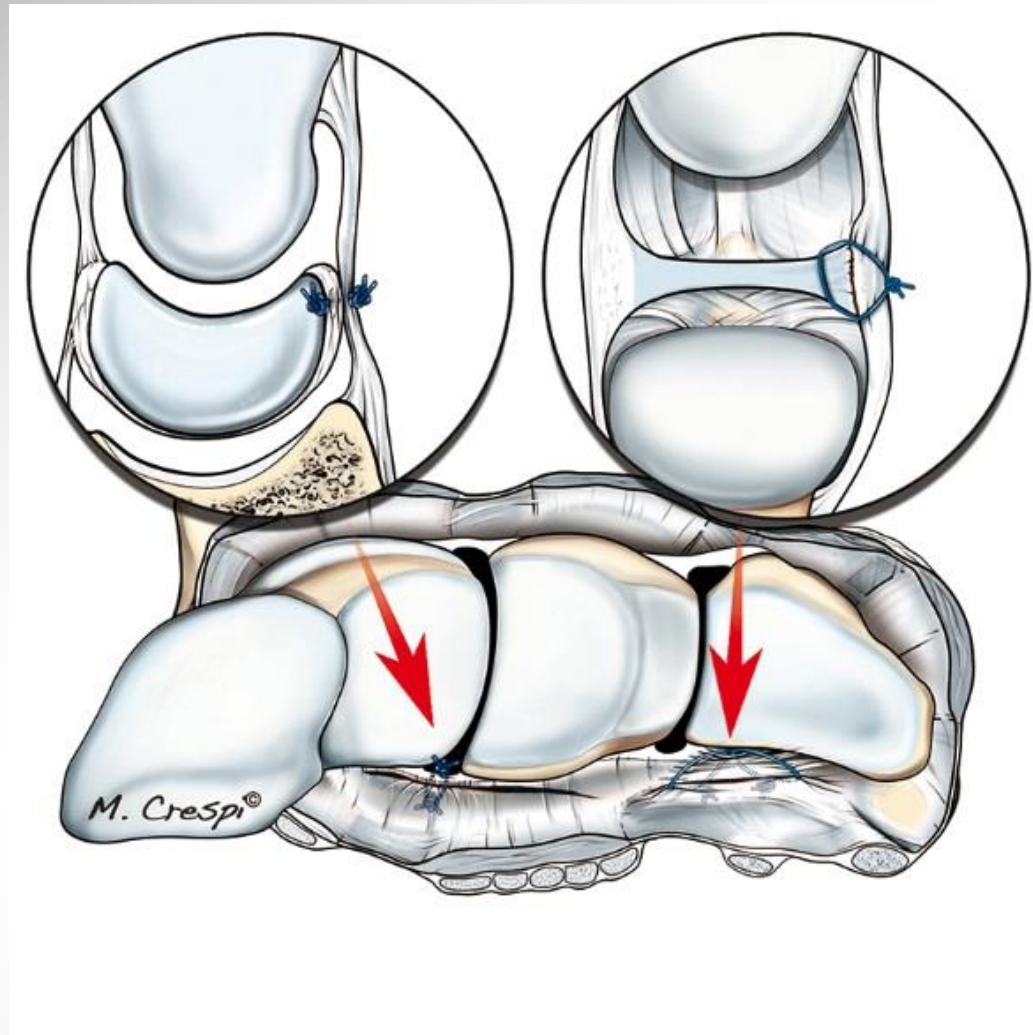


Arthroscopic Dorsal Capsuloligamentous Repair ADCLR



PARC LESION

The treatment combines arthroscopic suture of dorsal attachment of TFCC and dorsal capsulo-ligamentous repair.



Material

- *Between 2013 – 2014*
13 Parc Lesions
(Rare injury)
- 9 men 4 women
- Mean age : 36.6 yo (range 19 to 51)
- Sports injuries : 11 cases
high level : 1 case
- Average time between injury and surgery: 9.14 months
(range 5 to 28)

RESULTS

Follow-up : 19.34 months (range 12 to 28)

- **Pain :**
Preop VAS : 6.04 Postop VAS : 1.2
- **ROM :**
normal flexion–extension in 10 cases (76,9%)
normal pronation-supination in all cases (100%)
- **Strength :**
Preop: 25.03 kgf Postop: 45.28 kgf

Total functional outcomes

	Pre-op	post-op	controlateral
Flexion	50.39	63.42(p<0,01)	73.46(p=0,26)
Extension	55.47	76.76 (p<0,01)	78.99 (p=0,35)
Radial deviation	16.7	25.75 (p<0,01)	28.16 (p=0,48)
Ulnar deviation	25.35	36.12 (p<0,01)	37.18 (p=0,27)
Pronation supination	0-165	0-179 (p<0,02)	0-180 (p=0,16)
Wrist strength	25.03	45.28 (p<0,01)	46.92(p=0,18)

No problem with sporty level +++

Results

Outcome **was** related to :

- delay surgery (better outcome if short delay)

Complications:

- flexion stiffness 3 cases (range 30° to 40°)
- 1 Sudeck (healed)

Results

DASH:

PreOp : Average 65.02 (range 13.64 to 90.91)

PostOp : Average 9.13 (range 0 to 40.91)

Mayo WS:

Excellent : 6 cases

Good: 4 cases

Average : 3 cases

Poor: 0 case

CONCLUSION – PARC Lesion

This avulsion originates by a sudden block of the palmar hand or the dorsal forearm, during a swing movement.

This may cause a sudden dorsal translation of the proximal carpus with elevated pressure on an already tensioned dorsal radiocarpal capsule

The dorsal radio carpal structures can be seen as a unit.

It is possible that the lesion starts at the dorsal portion of the TFCC, and extends radially and distally,

It begs the question of whether the isolated large dorsal lesions of TFCC, could not be a lesion PARC to a less severe stage.

Arthroscopic capsuloligamentous sutures are simple and reliable procedures convenient for the patient

