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Arthroscopic Dorsal Ligamentocapsulodesis in the Treatment of Isolated Lunotriquetral Interosseous Ligamentous Injury: A Retrospective Case Series of 22 Patients

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Background: The literature is scarce regarding isolated tears of lunotriquetral interosseous ligament (LTIL). The purpose of this stuıdy was to present mid-term clinical and functional results of arthroscopic dorsal ligamentocapsulodesis in the treatment of isolated LTIL tears.

Methods: A total of 22 patients (8 female, 14 male; mean age = 31 years; age range = 18–42) with the diagnosis of *isolated* LTIL tears verified by wrist arthroscopy were retrospectively reviewed and included in the study. The mean follow-up was 55 (range = 24–84) months. The Modified Mayo Wrist Score, visual analog scale (VAS), flexion and extension deficits of passive wrist range of motion (ROM), pain-free ROM with forced wrist extension, and grip strength were measured in all patient both preoperatively and at the final follow-up appointment.

Results: The mean Modified Mayo Wrist Score significantly ameliorated from 50 ± 10.29 (range = 30–65) preoperatively to 86 ± 11.61 (range = 60–100) at the final follow-up ($p < 0.001$). The mean VAS score significantly improved from 7.1 ± 0.83 (range: 6–8) preoperatively to 2.2 ± 1.35 (range = 0–6; $p < 0.001$) at the final follow-up. At the final follow-up examination, the forced wrist extention was painless in all but three patients who developed pain at 70°, 75° and 80° of extension, respectively. The mean strength of hand grip significantly increased from 38.6 ± 9.68 (range = 24–54) kg to 49.5 ± 12.36 (range = 33–66) kg at the final assessment ($p < 0.001$). No major complications were observed during or after the procedure.

Conclusions: With the encouraging mid-term outcomes and a lower complication rate, arthroscopic LTIL dorsal ligamentocapsulodesis seems to be a safe and effective surgical technique in improving functional outcomes and reducing pain in the management of isolated LTIL tears.

Keywords: *Unotriquetral interosseous ligament, Capsulodesis, Ligamentocapsulodesis, Arthroscopic capsulodesis, Isolated lunotriquetral tears*

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INTRODUCTION

Tears of the lunotriquetral interosseous ligament (LTIL) may be isolated or associated with other radiocarpal or intercarpal ligament injuries.[1] Symptomatic and isolated tears of LTIL have been reported less commonly compared to other proximal-row ligament injuries.[2] Persistant ulnar-sided wrist pain following a trauma represents the main symptom of isolated LTIL injuries, and spectrum of the clinical signs may vary from dynamic to static lunotriquetral (LT) instability.[3] Although the exact mechanism underlying this disorder remains unclear, multiple risk factors have been identified, including perilunate or reverse perilunate injury patterns, age, and positive ulnar variance.[4]

Although there is no standard treatment approach to isolated LTIL tears, conservative measures are generally regarded as the first-line treatment. In symptomatic patients who are unresponsive to conservative management, different surgical interventions are recommended. Traditional open surgical methods aim to stabilize the LT joint by direct ligament repair, ligament reconstruction, or LT arthrodesis.[5,6] Over the past few decades, wrist arthroscopy has gained popularity in the diagnosis of LT instability, although, despite providing significant pain relief to most cases, these methods have been suggested to have higher complication and re-operation rates.[7] Chronic LTIL tears can also be dealt with arthroscopic procedures without more invasive intervention, most of which consisted of arthroscopic assessment of LT instability and debridement of the torn area down to bleeding bone.[8,9]

Dorsal capsulodesis of the LT joint is another method of LT stabilization, and several authors performed this method using extensor retinacular flap,[10] extensor carpi ulnaris,[3] or dorsal radiocarpal ligament.[11] While the technique of arthroscopic dorsal ligamentocapsulodesis (capsuloplasty), originally described by Mathoulin et al. (2009),[12] was performed for the treatment of chronic scapholunate ligament (SL) tears with favorable results,[13] according to our literature review, arthroscopic dorsal ligamentocapsulodesis (capsuloplasty) has not yet been performed in the treatment of chronic LTIL tears. To avoid extensive dissection of the wrist capsule, we have adapted and consecutively performed this arthroscopic technique to symptomatic, isolated LTIL tears for the past several years. This study aimed to present our preliminary results and experience with the arhroscopic dorsal ligamentocapsulodesis technique in managing such cases.

METHODS

Data collection and setting of the study

Patients who underwent arhroscopic dorsal ligamentocapsulodesis due to LTIL tears from 2011 to 2018 at our institution were retrospectively reviewed. Inclusion criteria for the study were: (1) patients with *isolated* LTIL tears verified by arthroscopy; and (2) a minimum follow-up of 24 months. Isolated LTIL tears were also defined based on the following inclusion criteria: (3) arthroscopic identification of LTIL tear; (4) no concomitant degenerative alterations outside the LT joint; (5) no concomitant injury to the triangular fibrocartilage complex (TFCC) and/or SL; (6) no evidence of ulnar impaction syndrome through radiograph or arthroscopy; and (7) no concurrent perilunate injury or reverse perilunate injury. Exclusion criteria were: (1) aforementioned concomitant injuries to the ipsilateral hand, (2) presence of positive ulnar variance, and (3) wrists that underwent previous surgery.

Participants

With the diagnosis of *isolated* LTIL tears verified by wrist arthroscopy, 22 patients (8 female, 14 male) who met the inclusion criteria were enrolled in the study and invited to a final follow-up examination. The approval of the Institutional Review Board was obtained prior to data collection, and informed consent was provided by all participants. Patients' medical records and radiological data were retrospectively reviewed.

The mean age was 31 (range: 18–42) years; the mean follow-up was 55 (range: 24–84) months. All patients presented with unilateral ulnar-sided wrist pain that was exacerbated by physical activity. There were 13 right and nine left wrists, with the dominant hand involved in 15 cases (Table 1).

The pain posed remarkable difficulties to each patient not only during recreational activity but also when performing work and daily tasks. The mean preoperative duration of symptoms was nine (range: 4–15) months. The physical examination disclosed diffuse tenderness

Table 1. Demographic Characteristics of the Study Participants

Number of patients	22
Gender (female/male)	8/14
Age (year), mean (min–max)	31 (18–42)
Follow-up (month), mean (min–max)	55 (24–84)
Right/left wrist	13/9
Dominant/nondominant hand	15/7

over the ulnar side of the wrist in addition to pain with gripping and wrist extension in all patients. Lunotriquetral ballottement test was positive in eight patients. While there was a history of trauma (a fall on an outstretched hand) in 12 patients, the remaining patients denied any major trauma.

Diagnosis and radiological assessment

The initial diagnosis was established clinically following a standardized physical examination and routine radiographical assessment of the wrist via anteroposterior and lateral views. LT joint space were measured in preoperative radiographs. Magnetic resonance imaging (MRI) was then used to confirm the diagnosis in all patients.

Initial treatment approach

Based on the senior author's preference and experience, all the patients initially underwent our conservative treatment protocol for at least three months, including immobilization in a splint during the painful period, nonsteroidal anti-inflammatory medication, and rehabilitation regimens restoring wrist joint sensorimotor control and strengthening extensor carpi ulnaris. None of the patients benefited from the conservative treatment modalities; thus, the wrist arthroscopy was performed.

Clinical outcome measures

The Modified Mayo Wrist Score,[14] visual analog scale (VAS), flexion and extension deficits of passive wrist range of motion (ROM), pain-free ROM with forced wrist extension, and grip strength were measured in all patients both preoperatively and at the final follow-up appointment.

The Modified Mayo Wrist Scoring system[14] is a validated functional outcome measure and is employed to assess wrist ROM, grip strength, pain, and functional status, allowing for a total count of 100 points in four categories: a score of 90–100 points is graded as an excellent result; 80–89 as good, 65–79 as fair, and less than 65 as poor. The VAS was used to assess changes in pain intensity. The VAS score utilized in this study is a modified and simplified measure in which the pain intensity experienced during daily activities is rated on a scale of 0–10, where 0 indicates no pain and 10 indicates the worst pain imaginable.[15] In the assessment of ROM, passive ROM of both wrists (flexion and extension) was first measured using a universal standard goniometer, and then flexion and extension deficits were calculated as the difference between both sides. In the measurement of pain-free ROM with forced wrist extension, patients were first instructed to extent their wrist while forcing their hand by an assistant in neutral radioulnar deviation and then asked to report the starting point of the pain. Pain-free ROM was defined as the degree between neutral wrist position and the starting degree of the pain. Grip strength was measured using a Jamar dynamometer (Jamar Hydraulic Hand Dynamometer™, Sammons Preston, Bolingbrook, Illinois, USA) and the mean of three obtained maximum values.

Arthroscopic dorsal ligamentocapsulodesis procedure

Each operation was performed by the same surgeon, who was expert in arthroscopic wrist surgery. Under regional anesthesia, the patient was placed in the supine position, and a pneumatic tourniquet was applied to the upper arm. The hand was suspended in a traction tower, and 3–5 kg of traction was applied by finger traps to the index and middle fingers. Midcarpal radial (MCR), midcarpal ulnar (MCU), 3–4, and 6R portals were alternately used as both working and viewing portals. The radiocarpal joint was initially visualized with a 2.4-mm, 30-degree arthroscope. SL, LT, and midcarpal joints were then examined by inserting a probe through the MCR portal. The arthroscopic appearance of the LTIL, SL ligament, and TFCC were noted in all patients, and tears of LTIL was intraoperatively graded based on the Geissler's arthroscopic classification (Table 2).[16] Subsequently, the debridement of LT joint was performed using an oscillating shaver (Artrex, Naples, FL, USA) from the radiocarpal space. In this stage, only remnants of the LTIL were debrided. Furthermore, the dorsal capsular dissociation was specifically investigated during radiocarpal arthroscopy. At the same region, partial cartilage debridement was performed for four patients with dorsal capsular dissociation.

At the stage of dorsal ligamentocapsulodesis, the camera was first inserted to the radiocarpal joint through the 3–4 portal. Then, a 3/0 PDS suture was passed through a 18G needle outside the joint, and via the 6R portal, the needle loaded with the suture was inserted into the midcarpal joint by passing through a piece of the dorsal wrist capsule and the remaining dorsal fragment of the LTIL attached to the dorsal horn of the lunate. A second needle loaded with the suture is then inserted in the same manner. The placement of the needles was that one was proximal to the joint capsule and the other distal (Fig. 1A–C). At this stage of the procedure, there is a risk of entrapping the tendons with suture, but the sutures can be inserted safely through the available space

Table 2. Preoperative and Final Follow-Up Clinical Outcomes of the Patients

Variables	Preoperative	Postoperative	*p* values
MMWS (mean ± SD) (min–max)	50 ± 10.29 (30–65)	86 ± 11.61 (60–100)	< 0.001
Poor (< 65)	14	-	
Fair (65–79)	8	3	
Good (80–89)	-	6	
Excellent (90–100)	-	13	
VAS (mean ± SD) (min–max)	7.1 ± 0.83 (6–8)	2.2 ± 1.35 (0–6)	< 0.001
Wrist ROM ° (mean ± SD) (min max)			
Flexion deficit	2.6 ± 0.55 (0–5)	2.4 ± 0.64 (0–5)	0.032*
Extension deficit	4.7 ± 0.78 (0–10)	1.5 ± 0.86 (0–5)	0.028*
Forced pain-free extension	51 ± 8.75 (40–65)	**	
Handgrip strength (kg/m^2) (mean ± SD) (min–max)	38.6 ± 9.68 (24–54)	49.5 ± 12.36 (33–66)	< 0.001

MMWS: The Modified Mayo Wrist Score, VAS: Visual analogous scale, ROM: Range of motion.

*$p < 0.05$.

**The forced wrist extention was free of pain in all but three patients who developed pain at 70°, 75° and 80° of extension, respectively.

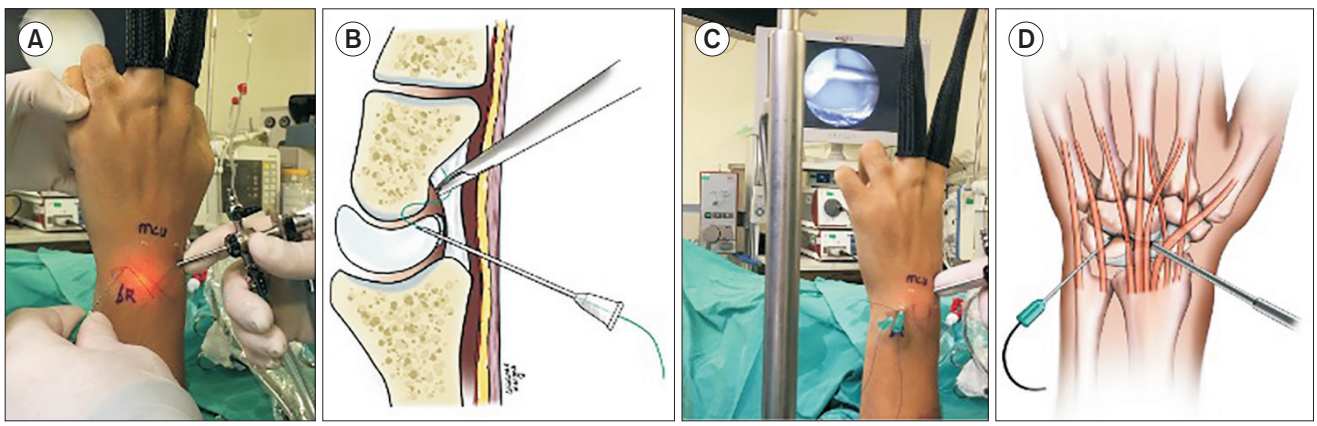

Fig. 1. At the first stage of the capsulodesis, via the 6R portal, the first needle loaded with the suture is inserted into the midcarpal joint (A) by passing through a piece of the dorsal wrist capsule and the remaining dorsal fragment of the LTIL (B). The second needle is then inserted in the same manner (C). Note that the area between the extensor digiti minimi and extensor carpi ulnaris tendons where the needles are passing (D).

between the extensor digiti minimi and extensor carpi ulnaris tendons in an oblique direction via the 6R portal (Fig. 1D). Later, the camera was transferred to the midcarpal joint through MCR portal, and both sutures were taken out of the MCU portal using a hemostat (Fig. 2). A knot was tied between the two sutures, and proximal traction was performed to both proximal ends of the sutures to place the knot on the LTIL ligament in midcarpal joint. Lastly, the finger traps were removed, and a second knot was tied between the two proximal ends while the wrist was in extension (Fig. 3).

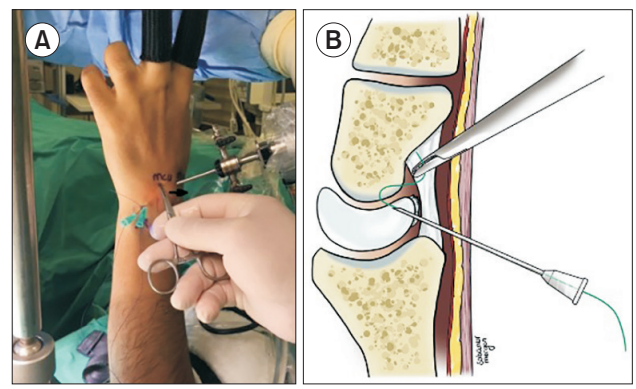

Fig. 2. At the second stage of the capsulodesis, both sutures are taken out of the joint using a hemostat from the MCU portal (A, B).

Postoperative protocol

No supplemental pin fixation was used. The wrist was immobilized at 40° extension in a splint for six

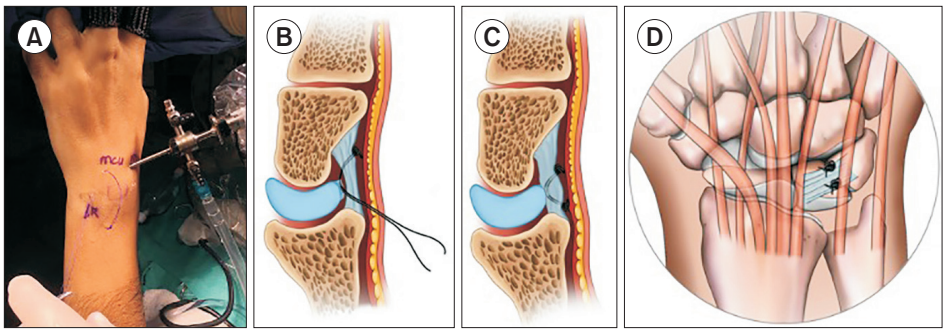

Fig. 3. At the final stage of the capsulodesis, distal ends of the sutures are tied and pulled by the proximal ends to place the knot on the LTIL ligament (A, B). Finger traps are removed, and proximal ends of the sutures are tied (C, D).

Table 3. Preoperative and Final Follow-Up Clinical Outcomes of the Patients

Variables	Preoperative	Postoperative	*p* values
MMWS (mean) (min–max)	50 (30–65)	86 (60–100)	< 0.001
Poor (< 65)	14	-	
Fair (65–79)	8	3	
Good (80–89)	-	6	
Excellent (90–100)	-	13	
VAS (mean) (min–max)	7.1 (6–8)	2.2 (0–6)	< 0.001
Wrist ROM ° (mean) (min max)			
Flexion deficit	2.6 (0–5)	2.4 (0–5)	0.032*
Extension deficit	4.7 (0–10)	1.5 (0–5)	0.028*
Forced pain-free extension	51 (40–64)	**	
Handgrip strength (kg/m^2)	38.6 (24–54)	49.5 (33–66)	< 0.001

MMWS: The Modified Mayo Wrist Score, VAS: Visual analogous scale, ROM: Range of motion.

*$p < 0.05$.

**The forced wrist extention was free of pain in all but three patients who developed pain at 70°, 75° and 80° of extension, respectively.

weeks. After six weeks, the use of splint was discontinued, and the physical therapy program was started. All patients received a similar rehabilitation protocol. After passive ROM exercises of the wrist began for a week, active ROM was then progressively allowed. Forced flexion was specifically avoided for the first three months in order to give the ligaments the time to heal without being stretched out. Strengthening exercises and hand ergotherapy were performed three months postoperatively.

Statistical analyses

All statistical analyses were done using SPSS software (version 22.0. Armonk, NY: IBM Corp.). A *p*-value < 0.05 was considered significant. Test for normality of the variables was done by Shapiro-Wilk Test and histogram graphics. Data are presented as "means", "standard deviations" or "ranges (minimum to maximum)". Non-parametric paired comparisons were performed using the Wilcoxon signed rank test.

RESULTS

Radiological results

In preoperative radiographic examination, none of the patients had more than 1 mm increase in LT joint space and evidence of wrist arthrosis. In preoperative MRI investigation, 18 patients displayed signs of suspected LTIL injury, which were, respectively, increased signal intensity in the LT ligament on T2-weighted and gradient-weighted sequences. Additionally, four of these 18 patients showed increased signal intensity in the dorsal capsular region, in which a dorsal capsular dissociation was determined by arthroscopic examination. Otherwise, the remaining four patients had no abnormal MRI findings, and the ligament tear was verified by diagnostic arthroscopy.

Intraoperative staging

According to Geissler's arthroscopic classification (Table 2), isolated LTIL tear was grade II in two patients, grade III in seven patients, and grade IV in two patients.

Clinical outcomes

The mean Modified Mayo Wrist Score significantly improved from 50 ± 10.29 (range = 30–65) preoperatively to 86 ± 11.61 (range = 60–100) at the final follow-up ($p < 0.001$). According to this grading, preopearatively eight patients had fair functional results, and 14 had poor results. At the final follow-up assessment, 13 patients had excellent functional status, and six patients had had good results, and the remaining three patients had fair results. Furthermore, the mean VAS score improved from 7.1 ± 0.83 (range: 6–8) to 2.2 ± 1.35 (range = 0–6; $p < 0.001$) (Tables 3, 4).

The mean preoperative flexion deficit decreased from 2.6° ± 0.55 (range = 0°–5°) to 2.4° ± 0.64 (range = 0°–5°) postoperatively ($p = 0.032$). The mean preoperative extension deficit decreased from 4.7° ± 0.78 (range = 0°–10°) to 1.5° ± 0.86 (range = 0°–5°) at the final examination ($p = 0.028$). In the preopeative period, all patients suffered from pain with the forced wrist extension, and the main pain-free extension ROM was 51° ± 8.75 (range = 40°–64°). At the final follow-up, the forced wrist extention was painless in all but three patients who developed pain at 70°, 75° and 80° of extension, respectively (Tables 3 and 4).

The mean strength of hand grip significantly increased from 38.6 ± 9.68 (range = 24–54) kg to 49.5 ± 12.36 (range = 33–66) kg at the final assessment ($p < 0.001$) (Tables 3, 4).

Complications

In two patients, restriction of extension at the fifth finger was observed, indicating that it was due to entrapment of the extensor digiti minimi tendon while inserting the needles into the midcarpal joint, with postoperative tenderness occurring in the area of the suture knots in four patients, but this resolved spontaneously after a mean postoperative period of 6.75 (range = 6–8) months. Nonetheless, this complication resolved spontaneously within a month after physical therapy started. No other complications were observed during or after the procedure.

DISCUSSION

Isolated LTIL tear is a relatively rare disorder and one of several causes of ulnar-sided wrist pain. Although LT arthrodesis may induce a number of potential complications, including loss of motion in the wrist joint, a prolonged recovery time, persistent pain, and nonunion,[17-19] no standard treatment approach exists, but in symptomatic patients who are unresponsive to conservative management, various surgical procedures are recommended, such as LT arthrodesis, ligament repair, and reconstruction.[20] The procedures, ligament repair or reconstruction, are demanding and require extensive approaches.[21] Besides, dorsal capsulodesis is another method of soft tissue reconstruction to stabilize the LT joint. However, only a few studies have described dorsal capsulodesis techniques for patients with LT instability, and most of these consist of extensive arthrotomy of the wrist capsule.[10,11,22,23]

To benefit from several advantages of the wrist arthroscopy over extensive arthrotomy, we consecutively performed full arthroscopic dorsal ligamentocapsulodesis in patients with chronic isolated LTIL tears. Our primary goal with this treatment approach was to relieve the pain intensity, improve or at least preserve wrist ROM and handgrip strength as well as prevent long-term arthritic alterations. Where our results demonstrated that arthroscopic dorsal ligamentocapsulodesis was effective at providing pain relief, improving grip strength, and ensuring pain-free wrist extension, unlike most studies on the topic, we specifically examined pain-free ROM with forced wrist extension, instead of total wrist ROM, as mechanical wrist pain with resistance to extension is an important cause of impairments in quality-of-life and functioning, as seen in our case series. Nonetheless, the mid-term follow-up of our cohort is insufficient to make an accurate judgment regarding the development of arthritic changes.

Despite the lack of epidemiological information on LTIL tears and LT instability, our literature review shows that these disorders predominantly present in young and middle-aged groups (as in our study) and therefore may cause a significant socioeconomic and quality-of-life burden on patients with physically demanding hobbies and professions. We inferred that substantial amelioration in the Mayo Wrist Score, which can measure the functional status and the ability to return to regular employment or activities, corresponded to improved quality-of-life in our cohorts. Furthermore, it may be considered that considerable ameliorations in both wrist ROM and handgrip strength are affirmative results for this working-age population.

While arthroscopic debridement of the torn area has been employed as an alternative surgical treatment in patients with chronic LTIL tears (both complete and partial) with favorable functional outcomes,[5] to our knowledge, arthroscopic dorsal ligamentocapsulodesis technique has not yet been performed. Indeed, Moskal et

Table 4. Clinical Outcomes of All the Study Participants

Patient no.	Age (year)	Gender	Geissler's grade	Pre-operative MMWS	Post-operative MMWS	Pre-operative VAS	Post-operative VAS	Forced pain-free extension (°)		Handgrip strength (kg/m^2)	
								Pre-operative	Post-operative	Pre-operative	Post-operative
1	37	M	III	55	90	7	2	50	Painless	41	53
2	28	M	III	50	90	7	1	50	Painless	51	54
3	33	F	III	40	80	8	3	50	Painless	26	33
4	34	M	II	60	100	6	0	65	Painless	38	62
5	22	M	II	65	90	6	2	65	Painless	49	63
6	36	M	IV	30	60	8	6	40	70	38	43
7	29	F	III	55	90	7	3	45	Painless	32	36
8	41	F	IV	35	80	8	4	40	Painless	24	34
9	31	M	III	55	100	7	0	60	Painless	45	56
10	29	M	III	60	95	7	1	55	Painless	54	66
11	33	F	III	45	80	8	3	45	Painless	25	33
12	21	F	III	50	90	8	2	45	Painless	26	51
13	18	M	III	60	100	7	1	65	Painless	41	65
14	29	M	II	65	100	6	1	60	Painless	45	60
15	36	F	III	40	80	8	2	40	Painless	24	40
16	34	M	III	40	85	7	2	60	75	44	58
17	42	M	II	65	95	6	1	50	Painless	48	60
18	23	F	III	50	65	8	3	55	Painless	38	44
19	28	M	II	45	90	7	2	50	Painless	42	55
20	31	M	III	40	70	8	3	45	Painless	33	35
21	30	M	IV	40	70	9	3	40	80	30	32
22	35	F	III	50	90	8	2	45	Painless	24	31

MMWS: The Modified Mayo Wrist Score, VAS: Visual analogous scale, ROM: Range of motion.

al.[24] first described an arthroscopic technique of capsulodesis for partial tears of LTIL in 2001, which aimed to stabilize the LT joint arthroscopically by increasing the tension with plication sutures in the ulnolunate, ulnocapitate, and lunotriquetrum ligaments. The authors reported significant improvements in wrist pain and function of 20 patients at a mean follow-up of three years. Differently from Moskal et al., we adapted the arthroscopic technique of dorsal capsuloplasty, which was originally described by Mathoulin et al.[12] for the treatment of SL instability, to the treatment of isolated LTIL tears. Our series of 22 patients with isolated LTIL tears (*Geissler Grade 2, 3, and 4*) have demonstrated encouraging preliminary results at the mid-term follow-up. Furthermore, our results are comparable or better than other series in the literature using open surgical treatment in the treatment of LTIL tears.

In our cohort, while MRI demonstrated no decisive signs in favor of the LTIL tear in four patients, and thus the definitive diagnosis was only established by the wrist arthroscopy in those cases, the most common symptom was the ulnar-sided wrist pain that was excarbated by hyperextension of the wrist during work and daily activities. One should keep in mind that persistent ulnar wrist pain with inconclusive radiological findings always makes clinicians suspicious about LTIL tears.

The main advantages and disadvantages of the presented technique should be noted. We believe that in addition to LT ligaments, debridement of the dorsal capsule overlying LTIL is essential for the ligamentocapsulodesis and thereby obtaining LT joint stability. Debridements of the capsule and ligament can endow a biological environment on the joint that is necessary for the capsulodesis. Although we found dorsal capsulodesis to be effective in improving pain and grip strength even in isolated unstable Geissler Grade 4 LTIL tears, the main disadvantage of the technique is that arthroscopic dorsal ligamentocapsulodesis can address only the dorsal LTIL. Accordingly, this technique may be insufficient in the case of complex injury.

It is also worth noting some technical key points of our arthroscopic procedure. We experienced restriction of extension at the fifth finger of two patients and considered it was due to entrapment of the extensor digiti minimi tendon while inserting the needles into the midcarpal joint. Therefore, we recommend that the area where the sutures are passed should be well identified not to catch the extensor digiti minimi tendon while passing the needle (Fig. 1D). The fifth finger should be moved to determine if there is an entrapment. Especially, in cases where LT ligament dorsal capsulodesis is performed, instead of Chinese trap, the use of finger trap as traction tool will be useful for controlling finger movements. As the Chinese finger trap grasps all the five fingers of the hand, it is difficult to establish if the suture passes through the tendon by moving the fourth and the fifth fingers. However, as the second and the third fingers are grasped with the finger trap, the tendon can be checked by the movement of the fourth and the fifth fingers. Needle orientation should be confirmed after reaching the capsule at the portal level.

Finally, several limitations of this study deserve consideration. The major limitations were its retrospective nature, mid-term follow-up period, and limited sample size. Another limitation was the lack of a control group. Further prospective studies are needed to confirm these results.

In conclusion, we experienced that with encouraging mid-term clinical outcomes and a lower complication rate, arthroscopic LTIL dorsal ligamentocapsulodesis is a safe and effective surgical technique in improving functional outcomes and reducing pain in the management of isolated Geissler grades II, III, and IV LTIL tears. This minimal invasive technique should be considered as an alternative treatment method to avoid damaging extrinsic ligamentous complex of the wrist in managing such cases.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

FINANCIAL DISCLOSURE

The authors declared that this study has received no financial support.

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