Additional Instruction

Prior to performing this technique, consult the Instructions for Use documentation provided with individual components – including indications, contraindications, warnings, cautions, and instructions.

Ordering Information

Some of the more common instruments for scapholunate are listed below.

Call +1 800 343 5717 in the U.S. or contact your authorized Smith & Nephew representative to order any of the following:

- 72201881  DYNOMITE™ 2.0 PK with one #2-0 ULTRABRAID Suture and Needles
- 72201882  SPYROMITE™ 2.0 PK with one #2-0 ULTRABRAID Suture and Needles
- 72202019  MINI TAC™ 2.0 with two #2-0 ULTRABRAID Suture and Needles
- 72202067  TWINFIX™ 2.8 Ti with two #2-0 ULTRABRAID Suture and Needles
- 72202040  Drill Kit: For use with SPYROMITE 2.0 and MINI TAC 2.0
- 72202082  Drill Kit: For use with DYNOMITE 2.0

CAUTION: U.S. Federal law restricts these devices to sale by or on the order of a physician.

Hand Anatomy

Scapholunate Ligament Repair

Operative Technique of Acute Injuries

A Small Joint Series Technique Guide

As described by
Michael G. McNamara, MD

![Hand Anatomy Diagram]

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Hand Anatomy

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Scapholunate Ligament Repair
Operative Technique of Acute Injuries
A Small Joint Series Technique Guide
As described by Michael G. McNamara, MD
or sub-acute cases, open repair is often of the wrist. Because of the late effects scapholunate advanced collapse (SLAC) carpal mal-alignment is progressive, and lunate bones. The effect of this by diastasis between the scaphoid, and it is often accompanied for flexion and rotatory subluxation of the characteristic by lunate extension, allows segment instability (DISI). This pattern, Complete disruption of the scapholunate or widening, of the scapholunate joint, another common sign of a patient may describe pain, swelling, and pain or partial scapholunate ligament tear experience various symptoms and has hyperextension of the wrist. As described by: of Acute Injuries Operative Technique Scapholunate Ligament Repair Operative Technique of Acute Injuries

Introduction

Anchorage, Alaska

Michael G. McNamara, MD

Alaska Regional Hospital

As described by:

References


Chung, Kevin C.

References

1. Support the patient’s wrist in a well-padded dorsal and volar spica splint.

Postoperative Protocol

2. Following surgery, the patient should use elevation, ice, or CryoCuff® on the wrist.

3. At ten days, remove the sutures and fit the patient with a thumb spica cast for two weeks.

4. At four to six weeks, begin gentle therapy-assisted active motion at the radiocarpal joint to help prevent stiffness.

5. The patient should refrain from any strenuous activity or sport for another month to protect against pin breakage.

6. Remove pins at eight weeks and begin active and passive progressive motion.

7. Elevate the fourth compartment off the dorsal capsule with a small portion gently debride the dorsal distal one-third of the dorsal veins and dorsal radial cutaneous nerve branches.

8. Release the third compartment and retract the extensor pollicis longus tendon radially.

9. Drill a hole at the desired anchor implantation site. Drill a hole with the 1.5 mm drill (for DYNOMITE™ 2.0 PK Suture Anchor) or the 1.8 mm drill (for SPYROMITE™ 2.0 PK Suture Anchor) (Figure 1). The angle of hole drilled is, therefore, dependent on the length of ligament available for repair. Commonly, the hole is drilled approximately 45° to the ligament injury. A hole may be drilled at 90° (perpendicular to ligament injury) Ligament length allows.

10. Maintain drill guide location and axial alignment with the prepared hole. Insert the suture anchor into the guide hole and prepared hole. Tap or twist the anchor into the bone until the anchor is fully seated to the desired depth. A laser mark indicator on the anchor shaft aligns with the proximal end of the drill guide to ensure proper insertion depth (Figure 4).

11. Once proper anchor depth has been achieved, rotate the nose cone on the suture anchor handle 90° counterclockwise to allow the suture and needles to be released from the handle. Remove the insertion device and guide from the anchor site (Figure 5).

12. Place horizontal mattress sutures from the repair site to the remaining scapholunate ligament to achieve deep purchase. Use a locking stitch if enough ligament is available.

13. Use the cone to debride the dorsal distal one-third of the scaphoid. Incorporate the dorsal IC from distal radial to the debrided portion of the scaphoid and suture the dorsal IC with the same sutures used to secure the scapholunate ligament (Figure 6).

14. Cut all pins just deep to the skin.

15. Carefully close the dorsal capsule, extensor retinaculum, and skin.

1. Place the patient in the supine position with the hand on an arm table.

2. Use an axillary block, regional, or general anesthesia.

3. Drape and prepare the upper arm and a tourniquet and place the hand in a traction tower.

4. Make an incision through the skin to the extensor retinaculum. Be careful to protect the posterior interosseous nerve transected and removed. Split the dorsal capsule obliquely along the edge of the dorsal intercarpal ligament (ICl). The dorsal ICl should be protected, released distal radially, then retracted for later use with capsulodesis (Step 13).

5. Remove pins at eight weeks and begin active and passive progressive motion.

6. Brace for another month to protect against pin breakage.

7. Patient with a thumb spica cast for two weeks.

8. The patient should refrain from any strenuous activity or sport for another month to protect against pin breakage.

9. Remove pins at eight weeks and begin active and passive progressive motion.

Postoperative Protocol

1. Support the patient’s wrist in a well-padded dorsal and volar spica splint.

Following surgery, the patient should use elevation, ice, or CryoCuff® on the wrist.

At ten days, remove the sutures and fit the patient with a thumb spica cast for two weeks.

At four to six weeks, begin gentle therapy-assisted active motion at the radiocarpal joint to help prevent stiffness.

The patient should refrain from any strenuous activity or sport for another month to protect against pin breakage.

Remove pins at eight weeks and begin active and passive progressive motion.

References


Scapholunate Ligament Repair
Operative Technique of Acute Injuries

Introduction
The scapholunate ligament—a primary stabilizer of the wrist—binds the scaphoid and lunate bones. Injury to the scapholunate ligament typically occurs due to hyperextension of the wrist. Depending on the severity of the injury or chronic nature of the injury to the scapholunate ligament, the patient may experience various symptoms and has numerous treatment options. An acute or partial scapholunate ligament tear causes pain and swelling in the wrist and may be treated with arthroscopic debridement and subsequent pinning for joint stabilization while healing. In more serious injuries, however, the patient may describe pain, swelling, and even a popping or clunking sensation in the wrist. Another common sign of a more serious injury is the complete disruption of the scapholunate ligament, the patient may experience various symptoms and has numerous treatment options.

Patient Preparation
1. Place the patient in the supine position with the hand on an arm table.
2. Use an axillary block, regional, or general anesthetic.
3. Drape and prepare the upper arm with a tourniquet and place the fingers in a traction tower.

Technique
1. Perform arthroscopic examination of the proximal and midcarpal joints to visualize and verify scapholunate dissociation of the radioscapophalangeal and midcarpal portals.
2. Remove the patient’s hand from the tower and place in pronation on the table.
3. Draw a lazy-S or straight line centered over the radial carpal joint (first akin to the Lister’s tubercle, approximately 4 cm to 6 cm. Another approach would be a transverse incision as illustrated.
4. Make an incision through the skin to the extensor retinaculum. A careful dissection dorsal veins and dorsal radial cutaneous nerve branches.
5. Release the third compartment and retract the extensor pollicis longus tendon radially.
6. Elevate the fourth compartment of the dorsal capsule with a small portal of the posterior interosseous nerve transected and removed. Split the dorsal capsule obliquely along the edge of the dorsal intercarpal ligament (ICL). The dorsal IC should be protected, released distal radially, and retracted for later use with capsulodesis (Step 3).
7. Two 0.65-mm K-wires placed into the dorsal scaphoid and dorsal lunate bones and used as joystick. The K-wire in the scaphoid is oriented dorsal to proximal, and the K-wire in the lunate is oriented proximal to dorsal. With the wrist in lateral profile, bring the K-wires parallel to each other to reduce the scapholunate interval and correct the DIII posture. Maintain the reduction using additional K-wires (size 0.045”) across the scapholunate joint. Place another 0.65-mm K-wire from the scaphoid to the capitate for further stabilization (Figure 4).
8. Using a small rongeur, gently debride the anatomic insertion site of the bone (usually the dorsal rim of the scaphoid) where the avulsed ligament has lifted off the bone. Drill a hole with the trajectory set to the desired distal scaphoid (Figure 1). Drill a hole at the desired anchor implantation site. Drill a hole with the trajectory set to the desired scaphoid (Figure 2). Place the drill guide at the desired anchor implantation site. Drill a hole at the desired anchor implantation site. Drill a hole at the desired anchor implantation site.
9. Use a locking stitch to secure the scapholunate ligament (Figure 5).
10. Once proper anchor depth has been achieved, rotate the dawone cone on the scaphoid handle 90° counter-clockwise to allow the scaphoid to be placed in to the hole. Remove the insertion device and guide from the anchor site (Figure 1). The Wrist and Hand Surgery (pp. 139-161). New York: Raven Press, Ltd., 1994.

Postoperative Protocol
1. Support the patient’s wrist in a well-padded dorsal and volar thumb spica splint.
2. Follow-up surgery, the patient should use a device to prevent elevation, ice, or Crystal Cast on the wrist.
3. At ten days, remove the splint and fit the patient with a thumb spica cast for two weeks.
4. At four to six weeks, begin gentle therapy-assisted active motion at the radiocarpal joint to help prevent stiffness.
5. Open repair is often necessary to treat severe cases of scapholunate advanced collapse (SLAC) degenerative arthritis tending towards carpal mal-alignment is progressive, characterized by lunate extension, allows dorsal intercalated segment instability (DISI). This pattern, scapholunate ligament tear is a transverse incision.
6. Another approach would be a transverse incision as illustrated (Figure 1).

11. Cut all pins just deep to the skin.
12. Place horizontal mattress sutures from the repair site to the remaining dorsal ICL. The dorsal ICL should be reattached, released distal radially, then retracted for later use with capsulodesis (Step 3).
13. Use the pin anchors to stabilize the dorsal distal two-thirds of the scaphoid. Incorporate the dorsal IC from distal radial to the distal portion of the scaphoid and secure the dorsal IC with the same sutures used to secure the scapholunate ligament (Figure 6).
14. Cut all pins just deep to the skin.
15. Carefully close the dorsal capsule, extensor retinaculum, and skin.

References
of the wrist. Because of the late effects scapholunate advanced collapse (SLAC) carpal mal-alignment is progressive, by diastasis between the scaphoid and lunate, and it is often accompanied for flexion and rotatory subluxation of the lunate, allowing diastasis instability (DISI). This pattern, Complete disruption of the scapholunate ligament has been identified on x-ray.

or widening, of the scapholunate joint, scapholunate ligament tear is diastasis, in the wrist. Another common sign of a even a popping or clunking sensation patient may describe pain, swelling, and joint stabilization while healing. In

Depending on the severity of the tear can be identified on x-ray. or partial scapholunate ligament tear numerous treatment options. An acute scapholunate ligament–a primary stabilizer of the wrist–binds the scaphoid and lunate bones. Injury to the carpal mal-alignment is progressive, by diastasis between the scaphoid and lunate, and it is often accompanied.

Patient Preparation
Place the patient in the supine position with the hand on an arm table.
Use an axillary block, regional, or general anesthetic.
Drape and prepare the upper arm off the dorsal capsule with a small portion

Technique
Perform an arthroscopic evaluation of the proximal and midcarpal wrist joints to visualize and verify scapholunate dissociation from the radiocarpal and midcarpal portals.
Remove the patient’s hand from the tower and place in pronation on the table.
Draw a lazy-S or straight line centered

Ligament Repair
Scapholunate

1. Support the patient’s wrist in a well-padded dorsal and volar thumb spica splint.
2. Following surgery, the patient should use elevation, ice, or Cryo/Cuff® on the wrist.
3. At ten days, remove the sutures and fit the patient with a thumb spica cast for two weeks.
4. At four to six weeks, begin gentle therapy-assisted active motion of the radiocarpal joint to help prevent stiffness.
5. The patient should wear a removable clamshell brace for another month to protect against pin breakage.
6. Remove pins at eight weeks and begin active and passive progressive motion.

References
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Anchorage, Alaska
Michael G. McNamara, MD
As described by:

Operative Technique
Ligament Repair
Scapholunate

1. Using a small rongeur,
2. Following surgery, the patient should use elevation, ice, or Cryo/Cuff® on the wrist.
3. At ten days, remove the sutures and fit the patient with a thumb spica cast for two weeks.
4. At four to six weeks, begin gentle therapy-assisted active motion of the radiocarpal joint to help prevent stiffness.
5. The patient should wear a removable clamshell brace for another month to protect against pin breakage.
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