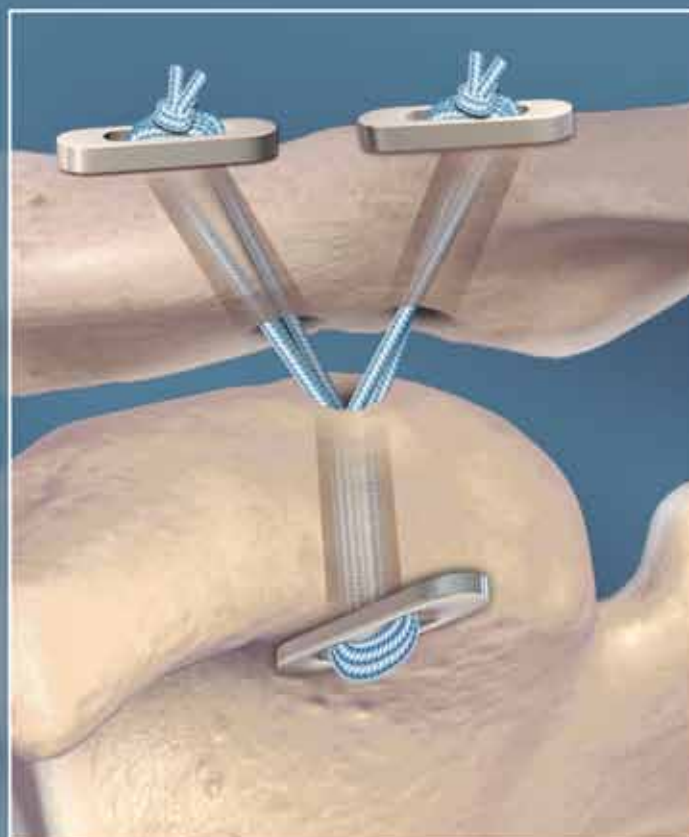




Open Stabilization of Acute Acromioclavicular Joint
Dislocation using the Twin Tail TightRope® System

Surgical Technique



Twin Tail TightRope System

Open Stabilization of Acute Acromioclavicular Joint Dislocation using the Twin Tail TightRope System

Background

The Twin Tail TightRope is another evolution of the TightRope that features two independent clavicle button tails and is designed to help reduce and stabilize the AC joint for open, acute AC injuries. Like the TightRope and GraftRope®, each clavicle button is independently joined to the coracoid button with a continuous loop of #5 FiberWire®. The twin tails enable the surgeon to stabilize the acromioclavicular joint with a device that matches the normal coracoclavicular ligament anatomy.

Surgical Technique

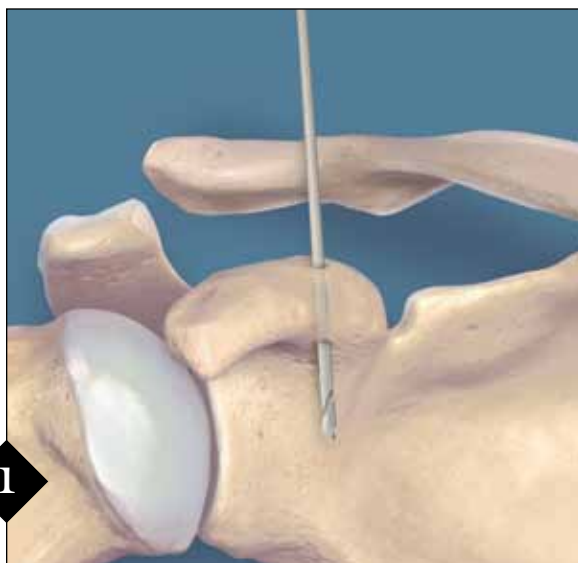
Position the patient in the beach chair or lateral decubitus position under a general anesthesia. Make an incision from the coracoid process just medial to the AC joint. Elevate the skin flaps and incise the deltotracheal fascia. Elevate the deltoid off of the clavicle to identify the subdeltoid space. Retract the deltoid to view the base of the coracoid process. Use an elevator or a radio frequency device to define the lateral and medial aspect of the coracoid process. Place blunt retractors medially and laterally under the coracoid process to protect the neurovascular structures. A hemostat or other blunt instrument can be placed underneath the coracoid process to feel the transition to the neck of the glenoid and the anterior scapula. The guide pin should exit underneath the coracoid at the identified transition zone.

Technique Uses

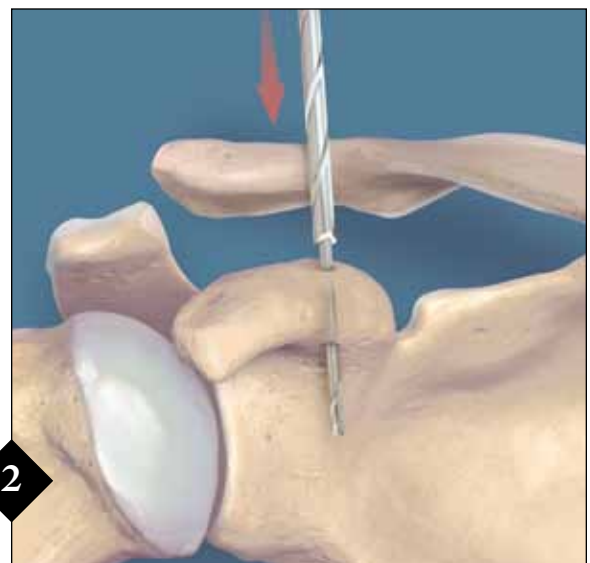
This technique is indicated for acute Grade IV-VI AC separations, as well as acute Type III separations which require operative treatment.

Technique Warning

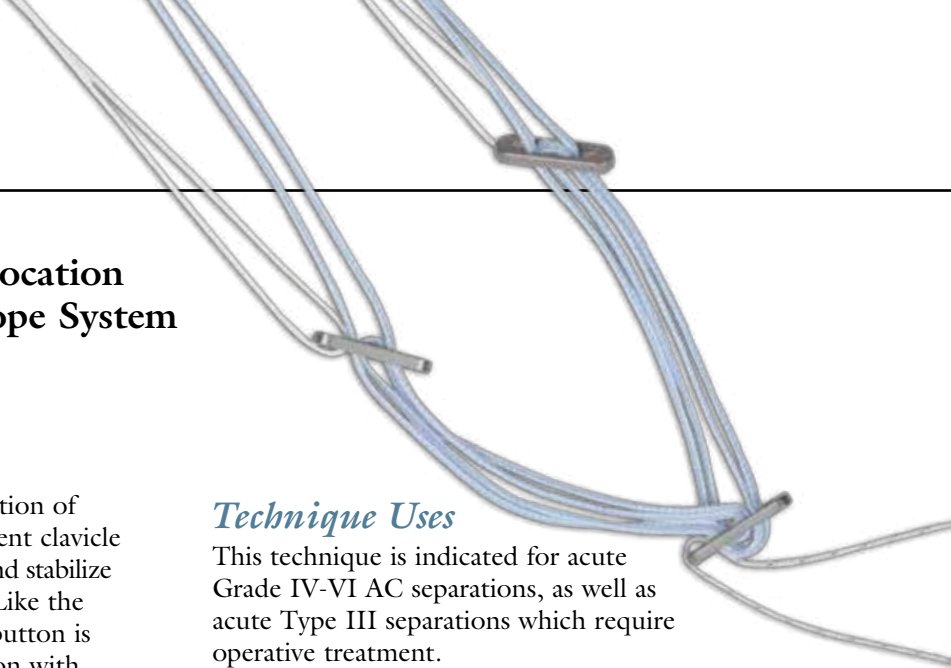
It is not intended that this technique be used as the sole means of reconstructing a chronic AC separation. Repair of chronic AC separations should always include a biologic component (i.e. allograft or autograft).

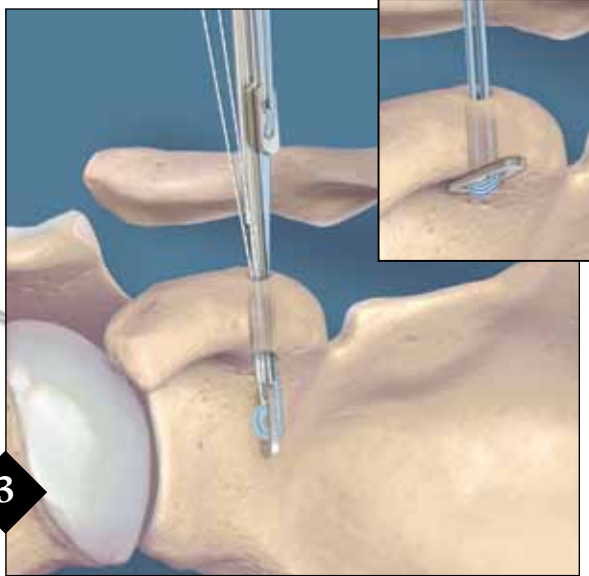


Center the 2.4 mm Drill Tip Guide Pin on top of the coracoid, aiming for the identified transition zone, and drill through both cortices. The Guide Pin Sleeve can be placed over the guide pin, leaving approximately 2 cm of the pin extended to help prevent over-penetrating.



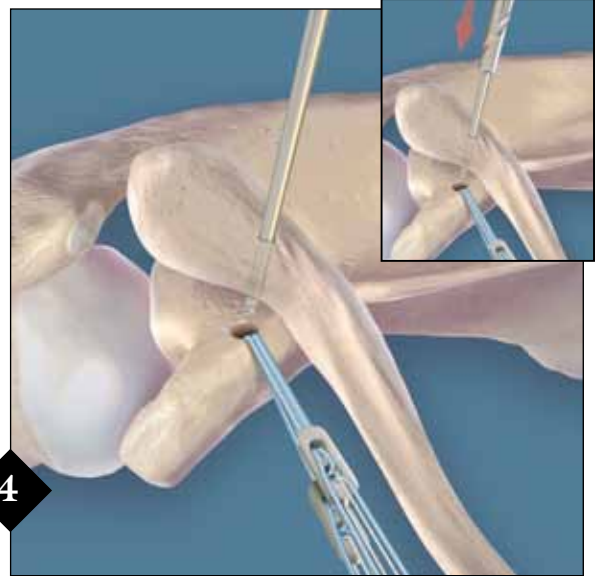
Advance the 4.5 mm Cannulated Drill over the guide pin and ream through both cortices to complete the coracoid tunnel. Care must be taken not to advance the guide pin while reaming. Remove the guide pin and the drill.





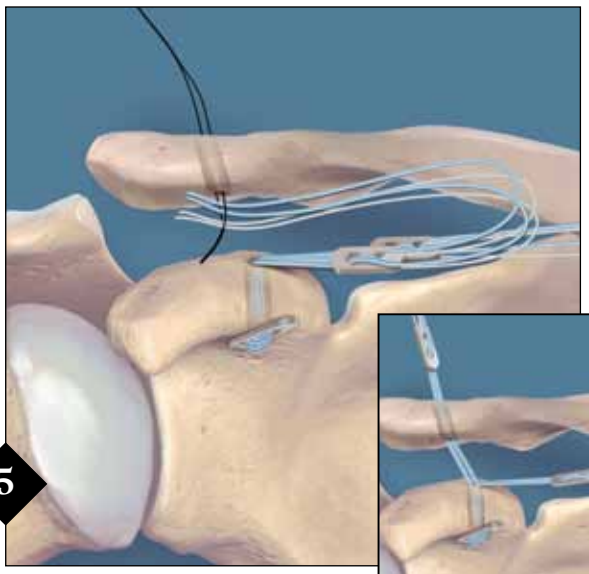
3

Insert the tip of the Button Inserter into the insertion hole in the coracoid button. Apply back tension to the traction suture to hold the coracoid button in the inserter. Push the coracoid button through the coracoid tunnel using the Button Inserter. Slide the spring-loaded button back to remove the inserter from the coracoid button. Grasp all sutures of the construct below the clavicle buttons and pull proximally to flip and seat the button underneath the coracoid process. Remove the white traction suture from the coracoid button.



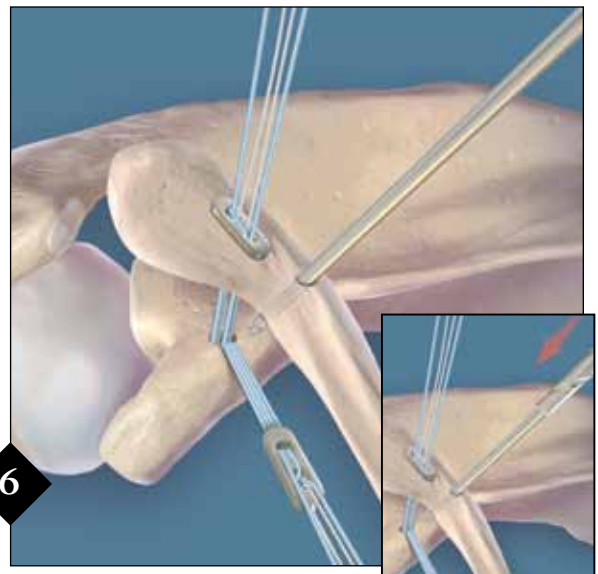
4

Aim towards the coracoid tunnel and drill the first clavicle tunnel anterior to the midline approximately 25 mm from the end of the clavicle using the 2.4 mm Drill Tip Guide Pin. The Guide Pin Sleeve can be placed over the guide pin, leaving approximately 2 cm of the pin extended to help prevent over-penetrating. Advance a 4 mm Cannulated Drill over the guide pin and ream through both cortices to complete the clavicle tunnel. Remove the guide pin and the drill.



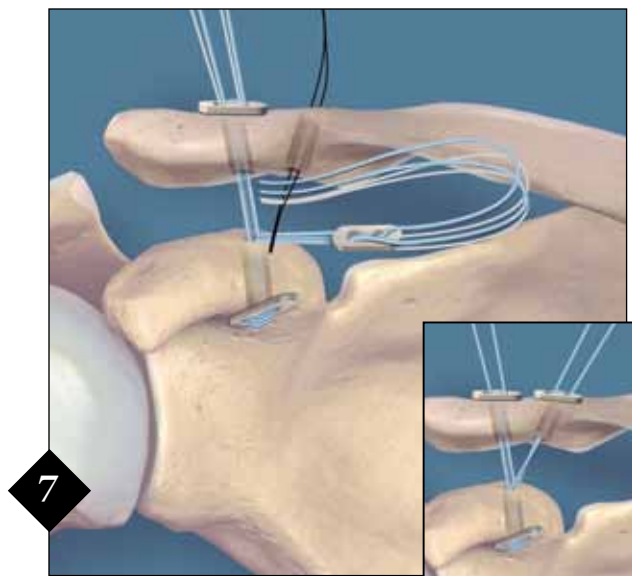
5

Pass a Nitinol suture passing wire through the clavicle tunnel using a Crescent SutureLasso™ SD or a Micro SutureLasso. Load all sutures from one clavicle button into the loop of the suture passing wire. Pull the wire to retrieve the sutures through the clavicle tunnel. Once all sutures are retrieved, use only the white traction suture to pull the clavicle button through the clavicle tunnel. A hemostat may be used to help guide the clavicle button through the base of the tunnel. *Note: Do not use the blue #5 FiberWire suture to pull the button through the clavicle, as it will cinch the device.*

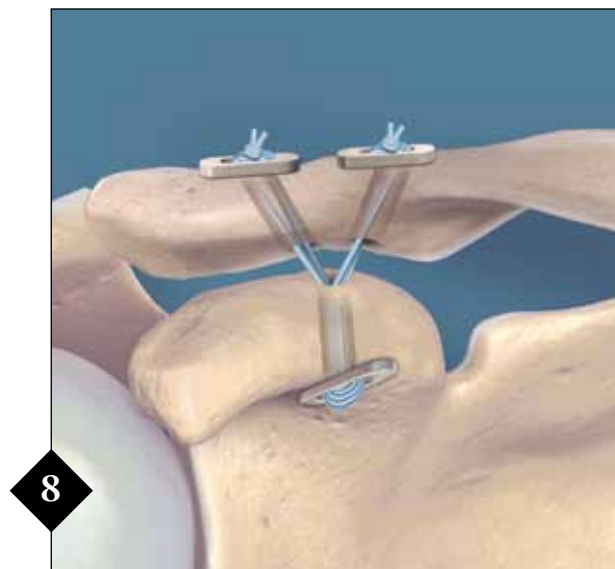


6

Aim towards the coracoid tunnel and drill the second clavicle tunnel posterior to the midline approximately 40 mm from the end of the clavicle using the 2.4 mm Drill Tip Guide Pin. The Guide Pin Sleeve can be placed over the guide pin, leaving approximately 2 cm of the pin extended to help prevent over-penetrating. Advance a 4 mm Cannulated Drill over the guide pin and ream through both cortices to complete the clavicle tunnel. Remove the guide pin and the drill.



Pass a Nitinol suture passing wire through the second clavicle tunnel using a Crescent SutureLasso or a Micro SutureLasso. Load all sutures from the second clavicle button into the loop of the suture passing wire. Pull the wire to retrieve the sutures through the clavicle tunnel. Once all sutures are retrieved, use only the white traction suture to draw the clavicle button through the clavicle tunnel. A hemostat may be used to help guide the clavicle button through the base of the tunnel. Remove all white traction sutures. *Note: Do not use the blue #5 FiberWire suture to pull the button through the clavicle, as it will cinch the device.*

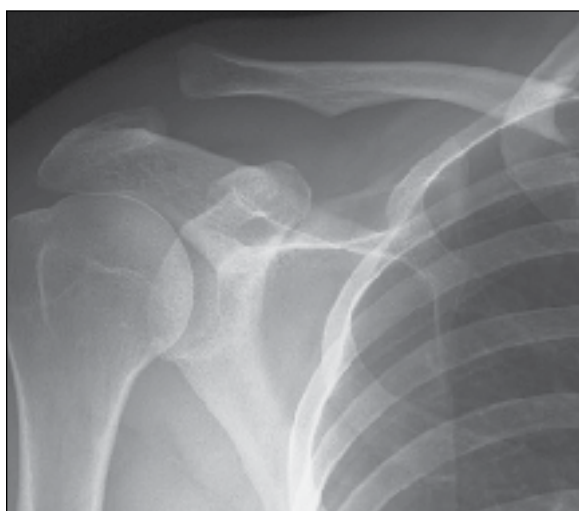


Reduce the clavicle. While an assistant holds the reduced clavicle, tighten the clavicle buttons onto the clavicle by sequentially pulling on the blue sutures, alternating between the two buttons. Tie the sutures over the top of the clavicle buttons, making a surgeon's knot and at least three additional half-hitches, reversing posts and throws. The clavicle buttons can be aligned to the surgeon's preference. Cut the sutures, being sure to leave adequate suture tails.

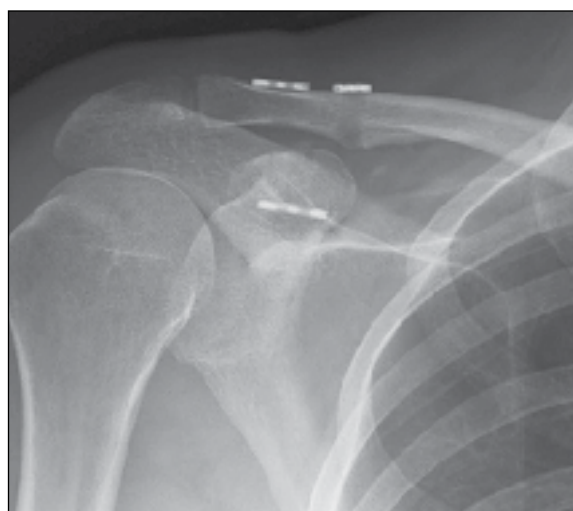
If a distal clavicle resection is not performed, the stability of the repair can be further enhanced by suturing the acromioclavicular capsule with 2-0 FiberWire before standard closure of the incision site.

Post-op Protocol

Place the patient in a shoulder immobilizer for a period of at least six weeks. Range of motion is restored from six to twelve weeks. Begin progressive resistance exercises after twelve weeks.



Type IV acute AC separation two weeks post injury



Post-op: Reduced using the Twin Tail TightRope

Ordering Information

Implant:

Twin Tail TightRope	AR-2264
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Required Instruments:

Drill Tip Guide Pin, 2.4 mm	AR-1250L
Cannulated Drill, 4.5 mm	AR-1204.5L
Long Drill, cannulated, 4 mm	AR-1204LX
Button Inserter	AR-2262
SutureLasso SD, Crescent	AR-4068C
or Micro SutureLasso, Minor Bend	AR-8701

Optional Instrument:

Guide Pin Sleeve	AR-2255CG-02
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*AR-1204LX and AR-2255CG-02 are available in the
Acromioclavicular Joint Reconstruction System (AR-2255CGS)*

AR-1204.5L is available in the Bio-Tenodesis Screw System (AR-1675S)



This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's Directions For Use.

This surgical technique has been developed in cooperation with Evan Lederman, M.D., Phoenix, AZ

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