Suture Buttons for Primary or Backup Tibial Fixation during Double Bundle ACL Reconstruction

RetroConstruction makes possible preservation of the tibial cortex during tibial drilling. This not only improves cosmesis and postoperative pain, but also allows for fixation over the tibial bone. Backup button fixation for all-inside ACLR has been shown to increase pull-out by over 50%. Primary cortical graft fixation through the use of a button preserves the tibial footprint, which helps to maintain proprioception and blood supply to the graft. The Suture Tensioner with Tensiometer allows simple, reproducible graft tensioning intraoperatively for all-inside double bundle ACL reconstruction when fixing the graft over a Suture Button.

1. Place one suture from each graft through the holes of the titanium Suture Button and slide the button down to bone.

2. Place one suture from each graft through the tip of the Suture Tensioner.

3. Place the sutures into the handle and capture in the suture reel. Turn the reel until the desired tension is achieved, as read on the handle.

4. Tie the loose sutures together over the button. Remove the tensioner and tie remaining sutures together.

Scorpion SutureMitt

The Scorpion SutureMitt is a great new accessory that will help pass and retrieve FiberWire, all in one step. The SutureMitt is a piece of clear tubing that snugly fits over the top jaw of the Scorpion and allows the suture and needle to pass through both and leave the suture captured in the SutureMitt for instant retrieval with Scorpion removal. The SutureMitt will be sterile packaged with each MultiFire Scorpion Needle (AR-13995N), at no additional cost. The SutureMitt is packaged with each MultiFire Scorpion Needle and can be assembled onto either the straight or the Humpback MultiFire Scorpion, by pushing and twisting the SutureMitt until flush.

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Glenoid Bone Loss Set

The Glenoid Bone Loss Set was developed in collaboration with Stephen S. Burkhart, M.D. It was designed to help surgeons address the complex issue of shoulder instability caused by bony pathology such as anterior glenoid bone loss, bony Bankart, glenoid fracture or engaging Hill-Sachs lesions. The set includes unique instrumentation to help make the Latarjet technique more consistent and repeatable, including:

• Osteotome blades for coracoid retrieval
• Drill guides for easy coracoid preparation and placement on the glenoid
• Retractors to ease exposure

The set also includes a set of long nesting guides to allow percutaneous screw placement for bony Bankart or glenoid fracture cases.

BioComposite Anchors

The BioComposite Corkscrew FT, SwiveLock, SutureTak, and PushLock are now available in multiple sizes and variations containing both ß-TCP and PLA. The addition of 15% Beta-tricalcium phosphate maintains comparable insertion strength and 12-week degradation properties to our PLA anchors. Studies suggest that early bone formation can be connected to the favorable osteoconductive and bioresorbable properties within ß-TCP.

FiberTape Retriever

The FiberTape Retriever was designed to ease suture management during SpeedBridge or SpeedFix rotator cuff repairs. The wide post on the upper jaw allows for easy FiberTape retrieval. The tip may also be used as a grasper.

Shoulder Chondro Pick

The unique offset design of the Shoulder Chondro Pick allows the surgeon to apply a penetrating force coaxial to the angled instrument tip preventing skiving on cartilage. The length of the instrument shaft allows use of a standard seven centimeter long cannula of any diameter down to a 5.75 mm internal diameter.
Ankle Fracture Management System

The Ankle Fracture Management System was developed to be the most comprehensive set available for the treatment of ankle fractures. Improved basic small fragment implants and instrumentation, along with locked screw technology, allow for confident and effective treatment of the majority of fracture patterns.

This set was designed to give the surgeon the armamentarium to more effectively address any patient/injury pattern encountered. Significant time and research were invested to develop anatomic plates, with specific emphasis placed on determining the appropriate angle of the locked screws. This allows for easier and faster implantation, while negating the need for more expensive “variable angle” locking plates and screws.

Included in the set are locking and nonlocking third tubular plates, 3.5 mm reconstruction plates, fibular avulsion plates (FAP), deltoid avulsion plates (DAP), and distal fibular fracture plates. All the fibular plate designs mate with the round lateral button on the ankle TightRope.

Centerline Endoscopic Carpal Tunnel Release Device

The Centerline Endoscopic Carpal Tunnel Release (ECTR) System utilizes a minimally invasive, single portal technique. It was developed to keep the surgeon’s hand in line with the pull of the blade – for added safety and ease-of-use.

The Centerline incorporates improved safety features compared to other ECTR devices that have been used for over 20 years and eliminates rotational moments and offers superior visualization. The thumb trigger pull is synergistic – increasing steadiness and facilitating control. The integrated disposable unit significantly diminishes the risk of mechanical failure and part loss or damage. The Centerline Carpal Tunnel Release System will attach to any standard video camera and light source and is available with reusable instrumentation to make your next endoscopic release safe, effective, and simple.

NEW - Noninvasive Ankle Strap

The noninvasive Ankle Distraction Strap is designed to cradle the foot for safe, soft tissue distraction. It is made of strong nylon strapping material with soft, nonslip foam pads for minimal soft tissue irritation and gripping treads to hold tight and secure during your arthroscopic ankle procedures.

This easy-to-use, one-size-fits-all device offers effective traction and grip which gives the surgeon a distinct advantage over current distraction devices.

The ankle strap is made with strong nylon strapping and is well-marked for quick orientation. The snap hook allows attachment to most table distraction devices.
BTB RetroButton

The versatility and simplicity of the RetroButton is now available for bone tendon grafts such as patellar tendon, quadriceps tendon, and Achilles tendon. The BTB RetroButton allows fast, consistent cortical fixation without overdrilling of the guide pin, reducing surgical steps and preserving bone.

**STRONGER**

The RetroButton passes through a guide pin hole without having to overdrill. This preservation of bone allows for enhanced cortical fixation and eliminates unnecessary steps in the procedure. The sturdy titanium button has a continuous ultra-high molecular weight polyethylene (UHMWPE) loop available in different lengths to provide superior strength, stiffness and load distribution.

**SIMPLER**

The BTB RetroButton, along with RetroConstruction, medial portal or transtibial femoral socket preparation, provides the meticulous surgeon with every anatomical tunnel placement option.

Raising the Bar, while Lowering Your Costs, with the new DualWave Arthroscopy Pump

The DualWave is an integrated inflow/outflow fluid management system that may also be used as a simple inflow-only arthroscopy pump, similar to our current pumps. That means two pumps in one, which gives you the ability to satisfy all surgeon’s preferences.

Although the DualWave offers you the latest in fluid management technology, it also provides an economical solution to the hard and soft costs associated with arthroscopy procedures.

"ReDeuce" your OR turnover time and save while doing it: The ReDeuce Tubing option decreases the amount of fluid and tubing used per case. Patient side tubing and unused fluid bags are transitioned to each subsequent case, limiting waste and eliminating the time spent preparing another pump for use. This system is used by numerous high and low volume OR's across the country.

User friendly:
Clinicians and staff need an arthroscopy pump that will not demand much of their precious time before, during and following a case. The DualWave was designed to allow for quick and simple set-up that can easily be performed by veteran, new and traveling clinicians. The easy to read touch panel video display gives real time pressure and flow readings, and displays the total fluid used during a case as well as the total run time at the end of a procedure.

Additionally, the DualWave offers the choice of a foot pedal or autoclavable remote control that allows the user to control the DualWave from the sterile field. This relieves the circulator of having to assist with the operation of the pump during the procedure.

Less fluid used means less time getting and spiking bags: Often times, circulating nurses spend a significant amount of time getting fluid from storage and spiking bags during an arthroscopic procedure. The DualWave allows the nurse to hang four spiked bags of fluid at one time vs. the traditional two.

Additionally, the DualWave uses considerably less amounts of fluid as compared to other pumps on the market. Hanging more bags at once and changing them out less, adds precious time to a circulator's day, resulting in a much more efficient OR.
Staged Transition to All-Inside ACL Reconstruction

Transitioning from a traditional transtibial approach to all-inside ACL reconstruction can certainly seem complex and overwhelming, and there are many steps that can be technically challenging. It is possible, though, to take a step-wise approach to all-inside ACL reconstruction by applying segments of the technique over time as your comfort level increases. This will allow you to make a smooth transition and enjoy the advantages and improved clinical outcomes that the culmination of these steps may provide. You will also see, as you progress through the steps individually, how each modification of an existing technique provides a clinical advantage on their own.

Femoral Fixation
Arthrex has developed techniques and instrumentation specific to medial portal and all-inside approaches for RetroButton and TransFix. Traditional interference screw fixation is also applicable to all-inside techniques.

Retrograde Tibial Preparation
Retrograde preparation of the tibia has been well documented as being more accurate, producing a cleaner tunnel that spares the tibial stump, and preventing fracture of the tibial plateau which could lead to synovial fluid ingress into the area of graft fixation. This step can be accomplished using either a RetroDrill or the FlipCutter.

Femoral Socket Preparation
An anteromedial portal approach using Transportal ACL Guides and Low Profile Reamers or the FlipCutter allow for an anatomic femoral socket to be created ensuring accurate footprint replication and increased rotational stability.

Tibial Socket with RetroScrew or Button Fixation
The RetroScrew has the unique ability to fix the tibial graft at the aperture, leading to the biomechanical advantage of a shorter, stiffer graft. The RetroScrew will also tension the graft as it is threaded into the tibia and will seal off the tibial tunnel to prevent synovial fluid from entering the tibial tunnel. Once your comfort level with "retrodrilling" increases, you can begin to use the FlipCutter with the Stepped Drill Sleeve to reproducibly drill a tibial socket with a consistent 7 mm cortical wall.

The Advantages of All-Inside ACL Reconstruction

The advantages of an all-inside technique for ACL reconstruction have been well documented. First and most importantly, an all-inside technique will lead to evidenced-based improved patient outcomes. Patients may experience less pain at all post-op days (days 1-7, 1.5 weeks, 6 weeks), demand less narcotics, and have improved cosmesis.* The all-inside technique will also let you differentiate your practice as providing the minimally invasive ACL.

*data on file
BTB RetroButton Graft Preparation and Surgical Technique

The BTB RetroButton allows for an independent, anatomic femoral tunnel to be prepared and the advantages of medial portal preparation or the outside/in FlipCutter technique to be realized with BTB fixation.

Graft Preparation
The femoral bone block should be 20 mm in length and at least 9 mm in diameter. Drill a 2.4 mm hole, perpendicular to the cortex, 10 mm distal to the proximal end. To allow for clearance of the RetroButton loop, it is recommended to bulletize the femoral bone block.

RetroButton Sizing and Attachment to Graft
Choose a RetroButton loop that is 15 mm shorter than the femoral intraosseous length. For example, if the intraosseous length is 50 mm, use a 35 mm BTB RetroButton.

Attaching the BTB RetroButton to the Graft

1. Pass the needle from the BTB RetroButton loop through the drill hole in the femoral bone block. Cut the needle off the loop.

2. Pass the loop between the loop strands under the button.

3. Place the loop over the button and cinch the loop down. Mark the graft to match the length of the femoral socket.
Q. What are some common reasons for failure of arthroscopic stabilization procedures?

A. Arthroscopic instability repair may fail for technical reasons (failure to shift capsulolabral tissues from distal to proximal; failure to correct a medially-displaced ALPSA lesion; failure to reduce capsular redundancy; and failure to recognize and repair a HAGL lesion). It may also fail because of structural deficiency (soft tissue or bone). Soft tissue deficiency is sometimes encountered as a result of thermal capsular necrosis following thermal capsulorrhaphy or as a consequence of multiple failed surgical procedures. However, the leading cause of failed arthroscopic stabilization is the failure to recognize significant bone defects (inverted-pear glenoid or engaging Hill-Sachs lesion) as contraindications to arthroscopic Bankart repair.

Q. What are your treatment recommendations for humeral defects such as Hill-Sachs lesions?

A. In approaching Hill-Sachs defects, I consider both the size and the orientation of the defect. A Hill-Sachs lesion that engages the anterior glenoid in a position of combined abduction and external rotation is defined as an "engaging Hill-Sachs lesion". Such a lesion, in association with an inverted-pear glenoid (i.e. a glenoid that has lost > 25% of its inferior glenoid diameter), is at high risk for recurrence after an isolated soft-tissue Bankart repair. Therefore, in this situation, I perform an open Latarjet procedure, utilizing a large coracoid bone graft with its attached conjoined tendon. This construct provides both an extension to the glenoid articular arc, as well as a soft tissue restraint from the sling effect of the conjoined tendon.

For a medium-to-large Hill-Sachs lesion in a shoulder that does not have a significant glenoid bone loss, I do a Remplissage technique, in which I inset the infraspinatus tendon into the Hill-Sachs lesion by means of suture anchors. The Remplissage fills the bone defect from the articular arc. I do the Remplissage only for Hill-Sachs lesions that are not associated with significant glenoid bone loss.

Q. You published a landmark paper assessing the impact of glenoid bone loss on arthroscopic stabilization procedures. What is your approach to this difficult problem?

A. The study that I did with Dr. Joe De Beer was published in 2000 in the Arthroscopy Journal (Burkhart SS, De Beer JF. Traumatic Glenohumeral Bone Defects and their Relationship to Failure of Arthroscopic Bankart Repairs: Significance of the Inverted-Pear Glenoid and the Humeral Engaging Hill-Sachs Lesion, Arthroscopy, 2000;16:677-694). This paper demonstrated that arthroscopic Bankart repair in the face of an inverted-pear glenoid (> 25% glenoid bone loss) results in a 67% recurrence rate. We subsequently have published our results of open Latarjet reconstruction in this same patient population (inverted-pear glenoid) and found only a 5% recurrence rate (Burkhart SS, De Beer JF, Barth JR, Cresswell T, Roberts C, Richards DP, Results of modified Latarjet Reconstruction in Patients with Anterior Inferior Instability and Significant Bone Loss, Arthroscopy, 2007 Oct;23(10):1033-41). In this very difficult group of patients with significant glenoid bone loss, the open Latarjet reconstruction has been an extremely reliable procedure.

Q. Are you working on any new projects that will help address glenoid bone loss?

A. I have been collaborating with Arthrex to develop an open Latarjet instrumentation system. This system streamlines the technique to make it easier and more reproducible. When I began doing the Latarjet procedure, it was essentially a “freehand” procedure. Our unique instruments will now allow a greater degree of precision and predictability to this rather demanding surgical procedure.
Surgery

Patient

• Neuroplasty, major peripheral nerve, arm or leg; other than tunnel (64721)

CODING SUBMENUS:

• Pain
• Trigger Finger/Tendon Sheath Cyst

ICD9 CODES:

• Carpal tunnel syndrome (354.0)
• Pronator teres syndrome (354.1)
• Synovitis, hand (719.24)
• Late effect, arm fracture (nonspecific) (905.2)
• Multiple neuritis syndrome (354.5)
• Pain in limb (729.5)
• Late effect, peripheral nerve injury (907.4)

CPT CODES:

• Injection, therapeutic; carpal tunnel (20526)
• Endoscopic carpal tunnel release (29848)
• Neuroplasty and/or transposition; median nerve at carpal tunnel (64721)
• Neuroplasty, major peripheral nerve, arm or leg; other than specified (64708)
• Tenotomy, open flexor or extensor tendon, forearm and/or wrist, single, each tendon (25290)
• Radical excision of bursa, synovia of wrist, or forearm tendon sheaths e.g., tenosynovitis, fungus, Tbc, or other granulomas, rheumatoid arthritis; flexors (25115)

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STO Featured Product Information

Suture Tensioner w/Tensiometer ........................................... AR-1529
Foot for Suture Tensioner ............................................. AR-1530
MultiFire Scorpion Needle inc. SutureMitt ...................... AR-19009N
BioComposite SwiveLock, 4.5 mm .......................... AR-23484LT
BioComposite SwiveLock, 5.5 mm .......................... AR-23484G
BioComposite CarpalTunnel Fluoroscopy Kit 6.5 mm .. AR-1927BFC-65
BioComposite CarpalTunnel Fluoroscopy Kit 5.5 mm .. AR-1927BFC
BioComposite CarpalTunnel Fluoroscopy Kit 4.5 mm .. AR-1927BFC-45
BioComposite PushLock, 2.9 mm .......................... AR-1928BC
BioComposite PushLock, 3.5 mm .......................... AR-1928BC
BioComposite PushLock, 4.5 mm .......................... AR-1928BC
BioComposite Subtalar, 2.4 mm .......................... AR-1934BCF-24
BioComposite Subtalar, 3 mm .......................... AR-1934BCF
FiberTape Retriever w/SR Handle .......................... AR-13974SR
FiberTape Retriever w/RR Handle .......................... AR-13974RR
FiberTape Retriever w/WishBone Handle ................. AR-13974W
Shoulder Chondro Pick, angled, 40˚ sp. .................. AR-8665
Glenoid Bone Loss Set .............................................. AR-7000S
Cannulated Screws, partially threaded, 3.75 mm x 30 mm - 42 mm AR-7000-30-42
Cannulated Screws, fully threaded, 3.75 mm x 30 mm - 42 mm AR-7000-30FT-42FT
Centerline Carpal Tunnel Release .................... AR-8850
Centerline Instrument Set ............................................. AR-8850S
Ankle Distractor w/o Aminon Plate .......................... AR-9043H
Locking Tibial Plate .................................................. AR-8943T
Locking Distal Fibula Plate ............................................ AR-8943BBL
Locking Tibial Plate ................................................... AR-8943T
BTT Retractor, 50 mm ............................................. AR-1588BT

3.75 mm x 30 mm - 42 mm .......................... AR-7000-30 - 42
Cannulated Screws, partially threaded,
3.75 mm x 30 mm - 42 mm .......................... AR-7000-30FT-42FT
Cannulated Screws, fully threaded,
3.75 mm x 30 mm - 42 mm .......................... AR-7000-30FT-42FT
Centerline Carpal Tunnel Release .................... AR-8850
Centerline Instrument Set ............................................. AR-8850S
Ankle Distractor w/o Aminon Plate .......................... AR-9043H
Locking Tibial Plate .................................................. AR-8943T
Locking Distal Fibula Plate ............................................ AR-8943BBL
Locking Tibial Plate ................................................... AR-8943T
BTT Retractor, 50 mm ............................................. AR-1588BT

For more information or to order, contact your Arthrex representative or call Customer Service at 800-934-4404.

Scope This Out is an informational newsletter designed to educate orthopaedic surgeons on state-of-the-art surgical procedures and “ pearls” to assist in improving surgical skills. This newsletter is published quarterly by Arthrex, Inc., exclusively for the orthopaedic surgeon community.

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