Arthroscopic Double Mattress Suturing of the Rotator Cuff

As described by LTC(P) Patrick St. Pierre, M.D., Orthopaedic Director, Tri-Service Primary Care Sports Medicine, DeWitt Army Community Hospital, Ft. Belvoir, VA, a specific double mattress suturing pattern utilizing Corkscrew anchors (with dual sutures passed through the rotator cuff with a BirdBeak, Penetrator or the Viper Suture Passer, pictured below) creates a more secure repair of the tendon compared with simple sutures. This technique has also been shown in Dr. St. Pierre’s laboratory work to be stronger than simple sutures and a modified Mason-Allen suture pattern.

1. The cortical bed is prepared by removing soft tissue and exposing cortical bone. A 5.0 or 6.5 mm Corkscrew or Bio-Corkscrew Anchor with two sutures attached is placed in the humerus at the deadman’s angle. A medial suture is passed with a simple suturing technique.

2. The two suture limbs from the second suture are then passed to form a horizontal mattress suture, lateral to the previous suture. Note: All three suture limbs are pulled out the anterior portal.

3. The medial (green) suture limb is pulled back out the lateral portal.

4. The horizontal mattress suture is tied from the anterior portal. Prior to tying the horizontal mattress, abduct the arm to 30° while applying tension on the lateral suture to ensure reduction of the tendon.

5. The simple suture is tied over the horizontal mattress using the lateral limb as the post. This ensures the knot stays in the lateral position. Tension is placed on both suture limbs to reduce the tendon.