The Di Giacomo Technique: Simplified Suture Passing in SLAP Repair

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Abstract: A 30° arthroscope is introduced via the posterior soft spot portal, and an anterosuperior portal is created with the use of a 7-mm disposable cannula. The anterosuperior portal is used for instrumentation. An 18-gauge spinal needle is passed via the portal of Neviaser and the rotator cuff into arthroscopic view above the superior labrum. A No. 1 polydioxanone suture (PDS; Ethicon, Somerville, NJ) is advanced through the spinal needle. An arthroscopic retriever or meniscal clamp is used to retrieve the free end of the suture and bring it out through a small anterior stab wound. A suture anchor is inserted via the anterosuperior portal into the superior neck of the glenoid. The more medial limb of the No. 2 Ethibond suture (Ethicon) from the suture anchor is retrieved with the inferior limb of the No. 1 PDS suture, and both are brought out through the anterosuperior cannula. The opposite end of the No. 1 PDS suture is then manually pulled, while, under direct arthroscopic visualization, the No. 2 Ethibond suture, now tied to the opposite end of the PDS, is pulled through the superior labral tissue. That anchor suture is retrieved and is placed outside the cannula that contains the other anchor suture. Standard arthroscopic knot tying is then employed. Key Words: SLAP lesion—Shoulder arthroscopy—Suture passage.

Arthroscopic repair of SLAP lesions requires a series of steps. These include preliminarily arthroscopic identification of the SLAP lesion, evaluation with visualization and probing, and preparation with gentle dusting debridement of the bony glenoid neck to which the labrum will then be reattached. A suture anchor may then be inserted, or alternatively, a passing suture may be first placed through the labrum. The following section describes the technique that we believe simplifies suture passage.

Surgical Technique

Shoulder arthroscopy is performed with the patient in the beach chair position. The patient is anesthetized under scalene block with sedation. Bony landmarks, including acromion, clavicle, spine of the scapula, and coracoid process, are drawn. A 30° arthroscope (Smith & Nephew Dyonics, Andover, MA) is introduced via the posterior soft spot portal, and an anterior superior portal is created with a 7-mm disposable cannula (Linvatec, Largo, FL). The anterosuperior portal is used for instrumentation that probes and shaves the SLAP lesion (4.5-mm full-radius shaver, Dyonics). After the bed of the SLAP lesion has been satisfactorily identified and prepared, an 18-gauge spinal needle is passed via transdermal puncture in the region of
the portal of Neviaser through the rotator cuff and into arthroscopic view above the superior labrum. Accurate suture placement is ensured by direct arthroscopic visualization of the spinal needle as it is passed through the superior labrum from superior to inferior. The trocar of the spinal needle is then removed, and a No. 1 polydioxanone (PDS) suture (Ethicon, Somerville, NJ) is manually advanced through the spinal needle into the shoulder, where it comes into direct arthroscopic view. An arthroscopic retriever or meniscal clamp is then used to retrieve the free end of the suture and bring it out through a small anterior stab wound. The 2 ends of the No. 1 PDS suture are clamped together outside the shoulder.

A suture anchor (Fastac; Arthrex, Naples, FL) is then inserted via the anterosuperior portal into the superior neck of the glenoid off the face. The more medial limb of the No. 2 Ethibond suture from the suture anchor is then retrieved with the inferior limb of the No. 1 PDS suture, and both sutures are brought out together through the anterosuperior cannula. These 2 sutures are then tied outside the shoulder, with 1.5 inches left from the suture end to be folded back over and past the knot. This helps in knot security as it is passed through the tissue. The opposite end of the No. 1 PDS suture, which is exiting via puncture at the portal of Neviaser, is then manually pulled, while, under direct arthroscopic visualization, the No. 2 Ethibond suture, now tied to the opposite end of the PDS, is pulled through the superior labral tissue. This anchor suture is then retrieved and placed outside the cannula that contains the other anchor suture (Fig 1). Standard arthroscopic knots are then tied under direct arthroscopic visualization (Fig 2). The labrum is probed for stability and security of fixation. A second suture anchor may be employed, if needed, with use of the same technique.

**DISCUSSION**

We have found that this technique for suture passage during arthroscopic fixation of SLAP lesions has the advantage of an excellent angle of approach via the portal of Neviaser, and it is reproducible. It simplifies this step and shortens operative time. Fixation of the labral tears is as secure as that attained with other suture anchor techniques. We believe that other arthroscopic shoulder surgeons may benefit from trying this approach.1-4

**REFERENCES**