Arthroscopic Laminar Spreader for Rotator Cuff Repair

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This video shows arthroscopic rotator cuff repair with the use of an arthroscopic laminar spreader, with placement of single-row (tension-band suture) anchors in the lateral aspect of the greater tuberosity.

Narrow subacromial space may make arthroscopic rotator cuff release and repair difficult. Manual or mechanical distraction (with the use of an arm positioner) can be used to increase the working space; however, consistent distraction is very difficult to maintain manually over time because of fatigue, whereas mechanical distraction may overstretch the brachial plexus.

This video describes a surgical technique to attain optimal access to the subacromial space during arthroscopic rotator cuff repair with no traction on the arm, using an arthroscopic laminar spreader to distract the humeral head inferiorly from the acromion.

Currently, an arthroscopic laminar spreader is used to perform the subscapularis split during an arthroscopic Latarjet procedure; however, it also can be used during rotator cuff repair. The arthroscopic laminar spreader is placed between the acromion and the tendon of the cuff through the anterolateral portal. Introducing the suture hook through the anteromedial portal, the suture is easily passed through the tendon because the tendon is under pressure with the laminar spreader. In the classic repair procedure, a grasper is used to retrieve one of the anchor sutures and the polydioxanone suture, which is used as a shuttle to pass it through the tendon. Both strands of sutures are tied with the use of a sliding locking knot. The laminar spreader is used again for the second suture. The arthroscopic laminar spreader results in an opening of more than 4 cm. On fluoroscopic imaging, the subacromial space increased with the use of the spreader.

A shoulder distraction device improves surgeon performance without surgical assistance and safely reduces surgical time. It also can be used anteriorly (to repair the subscapularis) or posteriorly (to repair the infraspinatus and teres minor) or to perform other procedures, such as superior capsule reconstruction, additional patch, etc.