Arthroscopic Segmental Labral Reconstruction With Fascia Lata Allograft Using the Knotless Suture Pull-Through Technique

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Background

Labral pathology is a common source of intra-articular hip pain in relatively young, active individuals. If more conservative treatment measures fail, hip arthroscopy is used to manage labral tears via débridement, repair, augmentation, or reconstruction, depending on the size of the tear, the tissue quality, and the state of the articular cartilage. Labral reconstruction, with the use of autograft or allograft, has become an increasingly important tool in a surgeon's armamentarium in the revision setting and the primary setting in patients with diminutive tissue or an irreparable tear. The two main techniques for labral reconstruction are segmental and circumferential repair, with segmental repair indicated for contained defects with labral tearing.

Purpose

This video and case presentation demonstrate arthroscopic segmental labral reconstruction with the use of a fascia lata allograft in the revision hip arthroscopy setting.

Methods

The anatomy of, pathogenesis of, and treatment options for hip labral tears are reviewed. The case presentation of a 45-year-old woman who underwent right hip labral repair 3 years ago is reviewed. Initially, the patient did well postoperatively but experienced symptom recurrence 2 months postoperatively, with new lateral thigh pain consistent with trochanteric bursitis. MRIs obtained at the time were negative for a labral re-tear. The patient underwent physical therapy, trochanteric injections, and arthroscopic trochanteric bursectomy, with continued pain in the groin and the lateral thigh. The patient presented to the authors of this video for evaluation. The patient reported relief from an ultrasonographic guided hip injection, and a magnetic resonance arthrogram revealed evidence of a labral re-tear, with chondrolabral delamination intra-articular pathology confirmed as a pain generator. After a thorough discussion of the risks, advantages, and prognosis, the patient elected to proceed with revision hip arthroscopy for segmental labral reconstruction.

Results

Deep sutures from prior labral repair were removed, and the degenerative labrum was removed from the 10-o'clock to 12:30-o'clock positions. A fascia lata allograft was rolled and whipstitched to shape the graft for labral reconstruction. A pilot hole for a 2.9-mm suture anchor was drilled at the anterior margin of the defect. Three biocomposite knotless suture anchors were then drilled and inserted into the acetabular rim. Suture tape was used to pull the graft into the joint. After the anterior end was secured into the pre-drilled pilot hole with the use of a 2.9-mm biocomposite suture anchor, passing sutures from each knotless suture anchor were passed around the labral graft and securely cinched down. The posterior tail of the graft was then resected with the use of a radiofrequency wand. Postoperatively, the patient experienced a good outcome with less pain and improvements in strength and range of motion. Overall, the patient was satisfied with the outcome.

Conclusion

In patients with pain after hip arthroscopy, surgeons must determine the onset, character, and location of the pain to distinguish repair failure from extra-articular pathology. Magnetic resonance arthrography and injections may be critical modalities in distinguishing these entities For patients with a recurrent labral tear and diminutive labral tissue and chondrolabral delamination, segmental labral reconstruction may afford good postoperative outcomes. The pull-through technique helps mitigate the risk of graft mismatch during segmental reconstruction. Suture management is critical to avoid soft-tissue bridges and ensure sequential securing of the graft to the acetabulum.