Editorial Commentary: Long Head Biceps Tendon Autograft Is an Ideal and Cost-effective Graft Choice in Superior Capsular Reconstruction of the Glenohumeral Joint

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Abstract: Recent literature supports the concept of superior capsular reconstruction (SCR) in patients with irreparable massive rotator cuff tears. Tensor fascia lata autograft and dermal allograft have been used with reported improvement of clinical outcomes. Long head biceps (LHB) tendon autograft has been proposed as an alternative autograft source for SCR. The advantage of LHB autograft is its anatomic proximity, robust graft strength, and cost-effectiveness. The biomechanical data, as well as short-term clinical outcomes, support the use of LHB autograft for SCR.

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Recent literature supports the concept of superior capsular reconstruction (SCR) with tensor fascia lata (TFL) autograft or dermal allograft reconstruction and has shown clinical improvement in patients with irreparable massive rotator cuff tears.[1,2] TFL autograft caries significant morbidity and dermal allograft has its limitations due to lower stiffness properties as well as increased cost. The choice of long head biceps (LHB) tendon as an autograft source is anatomically ideal, given its proximity to the rotator cuff. Given the common sacrifice of the proximal portion of the LHB in patients with rotator cuff disease, utilizing the tendon as an autograft for reconstructing the superior capsule is logical and adds minimal patient morbidity, and is cost-effective. Our group tested the biomechanics of SCR with LHB autograft versus TFL. We demonstrated superiority of the LHB autograft compared to TFL in the prevention of superior humeral migration.[3] Kim, Um, Lee, and Kim,[4] in their case series "Improved Clinical and Radiologic Outcomes Seen After Superior Capsule Reconstruction Using Long Head Biceps Tendon Autograft," demonstrate significant improvement in clinical outcomes in patients who underwent SCR with LHB autograft for irreparable rotator cuff tears. Comparative high-level studies are still needed to compare clinical outcomes of different grafts in SCR procedures.

Recent emphasis on value-based medical care requires medical professionals to pay attention to cost-effective approaches to deliver medical care. Cost containment and improved patient reported outcomes will drive the choice of future healthcare delivery. I believe that LHB autograft for SCR in patients with irreparable rotator cuff tear is a cost-effective source of graft with favorable biomechanical characteristics and now-demonstrated improvement in short-term clinical outcomes.

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