

Letters to the Editor

Comments on “Labral Base Refixation in the Hip: Rationale and Technique for an Anatomic Approach to Labral Repair”

To the Editor:

We read with interest the article by Fry and Domb¹ entitled “Labral Base Refixation in the Hip: Rationale and Technique for an Anatomic Approach to Labral Repair.” The authors described the importance of the acetabular labrum and suggested a technique for labral repair called “labral base refixation.”

They criticized the looped simple stitch technique because it causes bunching of the labrum and distortion of its normal triangular cross-sectional geometry. The most important objective in labral repair is to restore the labral seal and stabilize the chondrolabral dysfunction. This can be achieved with the looped simple stitch technique.^{2,3} The senior author (M.J.P.) reported good clinical outcomes of arthroscopic labral repair in professional hockey players using this repair technique in all stitches or in combination with the single-pass technique.⁴ Moreover, a 2-year follow-up study showed good improvement in the modified Harris Hip Score and high patient satisfaction with outcome in 112 patients treated with the same method.⁵ We believe that the suture looped around the whole labral tissue provides strong fixation, which allows the patients to perform greater range of motion in the immediate postoperative rehabilitation period. It is true that the labrum is compressed at the location where the suture is looped, but the general triangular configuration is not lost because the suture width is only 0.5 mm (Fig 1).

In our opinion, the most important factor in hip labral repair is suture anchor placement. It is essential to avoid eversion of the labrum and perform refixation of the labrum to its anatomic position. During knot tying, the surgeon can adjust the suture tension by releasing traction and evaluating the anatomic labral position from the peripheral compartment. In addition, periodic dynamic examination should be performed by moving the hip through a complete range of motion to assess the labral seal, especially in patients with femoroacetabular impingement, because the adequacy of bony resection must also be evaluated.

The quality of the labral tissue is also crucial to provide a good labral seal. In patients with a small amount of residual labral tissue (i.e., labral thickness <3 mm as mentioned in Table 3 of their article¹), we prefer labral reconstruction with the iliotibial band autograft.⁵ A tubularized iliotibial band is used and fixed with multiple looped simple stitches. The postoperative rehabilitation protocols are similar to those for patients with labral repair. Good clinical outcomes



FIGURE 1. Right coronal T2 fat-suppressed hip magnetic resonance image of a 33-year-old male professional athlete who underwent hip arthroscopy and labral repair with the looped simple stitch technique. The image shows good labral healing and adequate triangular labral shape (arrow) 3 weeks after surgery.

were reported with minimum follow-up of 1 year (range, 12 to 32 months).⁵

In conclusion, it is important to preserve the labral tissue and re-create the labral seal. In our experience the labrum triangular configuration is not lost by the looped simple stitch technique. A strong labral fixation is required to facilitate tissue healing during the postoperative rehabilitation period and to sustain the stress of early range of motion and avoid adhesions. Labral reconstruction should be considered in patients with a small amount of residual labral tissue.

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Author's Reply

We thank Lertwanich, Ejnisman, and Philippon, for their letter regarding our article describing the technique and rationale for labral base refixation (LBR). This letter reinforces several important points that form the basis for LBR, and it seems that the authors are striving for the same goals in labral refixation as we set out in our article, especially (1) restoration of a smooth transitional zone, (2) secure fixation of the labrum, and (3) restoration of the labral seal against the femoral head.

Lertwanich et al. begin with a paragraph arguing in favor of the looped simple stitch technique. It should be noted immediately that such argument is not necessary, because our article is not a criticism of any other technique. As pointed out in this letter, good results have been achieved in many studies with looped simple stitch refixation, including those citing the crucial contributions to the field by the senior author (Dr. Philippon). Our experience agrees with that of Lertwanich et al. in showing favorable outcomes with looped stitches.¹ Therefore the technique for LBR was developed not because of any deficiency in other techniques but rather as an alternative approach based on principles of labral biomechanics.

Specifically, the function of the labrum depends on contact with the femoral head. It is well accepted that the labrum's role in stability and shielding the cartilage from eccentric or excessive loads is dependent on the contact seal, which maintains congruity of the joint and a protective fluid film between the articular surfaces.²⁻⁴ We concur with the insight of Lertwanich et al. that appropriate anchor placement is essential to restore the anatomic position of the labrum, whether using the LBR or looped simple stitch technique. We further concur that secure fixation is necessary.

We point out in our article that a looped stitch may compress the labrum and cause a small leak in the suction seal at the site of the suture. This has been noted in our experience when viewing the repair from the peripheral compartment after traction has been released. We have also observed in a biomechanical pilot study that the LBR technique restored the suction seal. Conversely, a single looped

stitch decreased the force required to distract the hip, suggesting that the suction seal had been reduced. A complete biomechanical study is currently under way. The major limitations of our observations are that they occur at "time zero." In other words, it seems that the LBR technique may be of benefit in restoring the suction seal immediately after the repair. However, it is unknown whether any important difference persists after healing occurs and scar tissue forms around the labral repair.

The technique of labral reconstruction has been a major technical contribution to the field by authors of this letter. In our practice, we have found labral reconstruction using double-strand gracilis autograft especially useful for 2 major indications: (1) segmental loss of labrum due to extensive tearing and (2) revision hip arthroscopy after segmental labral excision. Future biomechanical research may show that labral reconstruction can restore the suction seal of the hip.

In conclusion, we thank the writers for their excellent points. It is clear that we share common goals in restoration of native labral anatomy. The nuances of how best to achieve those goals are constantly evolving. Biomechanical and long-term clinical studies will continue to be performed at our institution and others as we strive to better understand the importance of the labrum and how to restore its function. In our experience in over 150 cases, excellent early results have been achieved with the LBR technique, with early mobilization, a low incidence of adhesions, and a rapid return to sports.⁵ We hope that it may provide a useful option in treating pathology of the labrum and acetabular rim.

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