

Editorial Commentary: Reach Over the Top and Preserve the Hip Labrum



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Abstract: There is increasing interest in fine tuning of hip arthroscopy to improve the long-term outcomes of femoroacetabular impingement (FAI) surgery. Recently, some advocated for rim trimming and labral refixation without taking down the labrum, using a so-called over-the-top technique. Although some studies have already reported on the outcomes of this procedure, very few have focused on how maintaining an unharmed chondrolabral junction may decrease cartilage wear over time. Preserving labral attachment should be the standard of care in the treatment of FAI, to keep the suction seal working normally.

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Arthroscopic treatment of pincer-type impingement involves resecting the excessive rim at the anterosuperior acetabular area and labral repair, whenever possible. To access the rim, the traditional technique consists of labral detachment and further labral refixation.¹ Ilizaliturri et al.² and Redmond et al.³ suggested to remove the bony pincer “over the top” without separation of the labrum, to preserve the suction seal as much as possible. Isolated acetabular overcoverage results in squeezing the labrum between the rim and femoral head-neck junction, usually maintaining the chondrolabral junction unharmed; this is different from cam-type femoroacetabular impingement (FAI), in which disruption of the chondrolabral intersection does naturally exist.^{4,5} In this scenario, the arthroscopic technique without labral detachment was initially described to treat isolated pincer-type FAI. However, this practice was adopted by many hip preservation surgeons even in the presence of combined FAI with evidence of little damage or no harm to the chondrolabral junction.⁶

The work by Forster-Horvath, Unterreithmeier, Fries, Ganal, Gütler, Vogel, and Herzog, “Midterm Follow-Up and Assessment of Cartilage Thickness by Arthro-

Magnetic Resonance Imaging after Arthroscopic Cam Resection, Labral Repair, and Rim Trimming Without Labral Detachment,”⁷ analyzed the midterm clinical and radiological outcomes of arthroscopic treatment of FAI with femoral osteoplasty, labral repair, and rim trimming without labral detachment. The authors further analyzed cartilage thickness with magnetic resonance arthrography (MRA) using coronal proton density images. To look critically at the work by Forster-Horvath et al.,⁷ the assessment of cartilage integrity at 3 weightbearing subregions needs to be clearly elucidated. First, the authors used different magnetic flux densities within preoperative and postoperative evaluation (3 versus 1.5 T). This issue carries a bias for adequate comparison of cartilage wear, making the assessment of acetabular cartilage status even more difficult in the absence of ipsilateral leg traction.⁸ Second, given the incapacity of routine MRA to detect chondral lesions (mostly on the acetabular side), several advanced magnetic resonance imaging (MRI)-based techniques (T1 rho, T2*, delayed gadolinium-enhanced MRI of cartilage [dGEMRIC]) have been developed to penetrate the cartilage tissue and help quantify cartilage degeneration before and after hip joint-preserving surgery, and thus are useful tools for patient selection.^{9,10}

One of the aims of hip joint preservation surgery, above eradication of pain and reduction of cartilage wear, is improvement of function. Forster-Horvath et al.⁷ used the nonarthritic hip score (NAHS) and the short form-36 (SF-36) to assess function, using the minimally clinically important difference (MCID) as a

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threshold to define failure. Although the authors found no correlation of patient-reported outcome measures (PROMs) with extent of cartilage wear measured by MRA, they did find a significant association between improved postoperative range of motion and better clinical outcomes. It is yet to be clarified whether MCID analysis is superior to substantial clinical benefit (SCB) or patient-acceptable symptomatic state (PASS) as a measurement of clinical function. Although SCB represents the best possible outcome, MCID is the lower bound and delineates the minimum improvement target.¹¹ On the other hand, PASS represents an absolute value of what can be considered acceptable (i.e., normal) after surgery. This issue calls for a further standardization of how PROMs and their threshold values should be interpreted.

Although Forster-Horvath et al.⁷ reached interesting conclusions, the cohort was small (78 hips) and lacked a control group of patients treated with the traditional labral resection technique. Besides this, the statistical analyses were based mostly on linear correlations (Pearson test) instead of multivariate or linear regression analyses. The latter would have been useful to detect independent risk factors for surgical failures.

Overall, the study by Forster-Horvath et al.⁷ provides relevant data at midterm on what can be expected after treating combined FAI with rim trimming over the top, keeping the integrity of the suction seal. Because removal of the labrum results in lower intra-articular hip contact area and loss of suction seal,¹² we think that maintaining the chondrolabral union will help improve stability, load distribution, regulation of the synovial fluid, proprioception, and maintenance of intra-articular negative pressure.¹³

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