

# Editorial Commentary: Despite Decades of Research on Patellar Instability, the Isolated Lateral Release Endures



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**Abstract:** Surgical management of patellar instability has transformed over the last 40 years as our understanding of contributing anatomical factors, particularly medial patellofemoral ligament insufficiency, has matured. The International Patellofemoral Study Group recently concluded with 89% agreement that lateral release should not be done in isolation for patellofemoral instability. And yet, with 11% dissent, controversy remains, and the isolated lateral retinacular release for patellar instability continues to be favored by a subset of surgeons. In my opinion, lateral retinacular release may have a role in the rare situation in which laterally based capsuloligamentous tightness has led to focal patellar compression, but in the setting of patellar instability, lateral release should not be used alone as a solution for patellofemoral instability.

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The International Patellofemoral Study Group in 2018 concluded with 89% agreement that lateral release should not be done in isolation for patellofemoral instability.<sup>1</sup> The consensus documented a shift in expert perspectives on treatment of patellofemoral instability following more than 2 decades of research since publication of the technique of medial patellofemoral ligament reconstruction (MPFLR) and more than 4 decades since the original description of isolated lateral release for patellofemoral instability in 1974.<sup>2,3</sup> And yet, with 11% dissent, controversy remains.

Database analysis through tools like PearlDiver (PearlDiver Technologies, Fort Wayne, IN) offer us the ability to observe trends in practice on a very broad level. Through PearlDiver, Kamalopathy, Rush, Montgomery, Diduch, and Werner<sup>4</sup> at the University of Virginia provide interesting insight on treatment of patellofemoral instability in the skeletally immature in their study, "A National Perspective of Patellar Instability in Children and Adolescents in the United States: Medial Patellofemoral Ligament Reconstruction Is Three Times Higher Than the Incidence of Isolated Lateral Release." The years of

practice in the United States they examine (2010-2018) are those immediately leading up to the aforementioned international survey published in 2018. They report an unchanged incidence of MPFLR in the years 2010-2018 (7.1-5.9 per 100k adolescents) in the United States but a significant drop in the incidence of isolated lateral release for patellar instability (6.1-1.8 per 100k adolescents), as well as a reduction in the use of concomitant lateral release performed with MPFLR (32% in 2010 to 18% in 2018). The rate of concomitant tibial tubercle osteotomy also increased significantly in this time period.

The findings of Kamalopathy et al. can be looked at in 2 lights. On one hand, they highlight a shift by the majority of U.S. orthopaedic surgeons toward a multifaceted approach to patellofemoral instability, which addresses more of the bony and soft-tissue influencers of instability. On the other hand, this study also provides evidence of the continued use of the isolated lateral release for patellar instability by a subset of surgeons. Long-term clinical outcomes and cadaveric studies both support the importance of maintaining the lateral retinaculum for stability.<sup>5-10</sup> Yet, clearly isolated lateral release is still being performed, with those who remain in favor citing their own supporting studies. Two years before the period evaluated in Kamalopathy et al.'s study, Gerbino et al.<sup>11</sup> published long-term follow-up of isolated lateral release performed in adolescents, with outcomes for patellar instability equal to releases performed for lateral compression. A 2020

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meta-analysis study by Tan et al.<sup>12</sup> reports good short-term outcomes of isolated lateral release and recommends its use as a potential cost-saving alternative to MPFLR. It is my own opinion that while lateral retinacular release may have a role in the rare situation in which laterally based capsuloligamentous tightness has led to focal patellar compression, in the setting of patellar instability it should not be used alone as a solution to patellofemoral instability.

Many will attest to the fact that views espoused by experts at conferences or in editorials can sometimes vary significantly from what is done by the majority of orthopaedic surgeons out in practice. Studies like Kamalpathy et al. shed light on the changes in treatment decisions being made across a large country over time and therefore should be of interest to any reader who wishes to understand how their own treatment algorithm compares with those around them. In the case of the isolated lateral release for patellar instability the trend suggests that it is one treatment edging closer to extinction...or perhaps not?

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