Is It Lateral Retinacular Lengthening Versus Lateral Retinacular Release or Over-Release?

To the Editor:

As the first author to publish about the lateral release, in 1974,[1] I feel an obligation to comment on the article "Open Lateral Patellar Retinacular Lengthening Versus Open Retinacular Release in Lateral Patellar Hypercompression Syndrome: A Prospective Double-Blinded Comparative Study on Complications and Outcome" by Pagenstert et al.[2] in the June 2012 issue of *Arthroscopy*. The abstract describes a well-designed prospective study with the results clearly favoring lengthening compared with release. However, the abstract fails to show a design flaw that made these poor results for the release-only group a foregone conclusion.

In the body of the work, we learn that all the patients had nearly identical releases to the same endpoint.[2] Then, half of the patients had a pants-over-vest closure of the lateral capsuloligamentous structures to achieve the lengthening, and the remaining half had neither closure nor repair as the release-only cohort. In the description of the surgical procedure, the authors described the 2 techniques in detail. In both groups the release was extended in a stepwise manner until a "turn-up" sign of 90° patellar rotation (rotational elevation of the lateral patella up to 90° in relation to the epicondylar axis) ensured a complete decompression. This technique of using the 90° turn-up sign as an endpoint for a lateral release was taken from a study published in 1986.[3] Soon after its publication, the 90° turn-up test for an adequate release was either quickly discarded or never adopted by careful and knowledgeable surgeons for the very reasons found in this study: an unacceptably high incidence of quadriceps atrophy, iatrogenic medial patellar subluxation, and worse clinical outcomes, all the result of over-release of the lateral retinaculum. Unfortunately, many surgeons attributed these severe adverse complications caused by over-release to all lateral release procedures.

It appears to be more than a coincidence that the 2 studies referenced by the authors that showed a very high incidence of medial patellar subluxation and poor results were published 2 years[4] and 4 years[5] after the 90° turn-up test was published. Such excessive over-release of the lateral soft tissues plus improper patient selection, such as releasing a lateral retinaculum that is not tight, are the major reasons for poor results after lateral release surgery. Because the purpose of a lateral release is to normalize the tight soft-tissue restraints, there is no reason to release the retinaculum beyond the goal of 1 to 2 patellar quadrants of medial patellar glide or a lateral tilt-up of approximately 60° as advocated by Ewing in 1991.[6] To my knowledge and in my experience, an isolated lateral retinacular release performed properly in this manner has never caused an iatrogenic medial subluxation with severe quadriceps atrophy.

This study raises ethical concerns about the selection of a technique that is known to produce such an extensive lateral release that it can cause an over-release, which in a high proportion of patients leads to the severe complication of iatrogenic medial subluxation, and then leaving half the patients unrepaired. In the introduction, the authors seem to understand that such an extensive decompression can lead to an over-release, which can then be repaired by the Z-plasty lengthening. If the selection of the 90° turn-up test as an endpoint was made without knowledge of its severe and adverse consequences, perhaps the publication of this letter will help correct this deficiency.

Finally, I would challenge the authors to repeat the study but instead use the standard lateral release technique to compare with the lengthening technique. Such a study would be a more realistic comparison, provide information that is new, and avoid the risk of serious injury for the release-only patients.

Alan C. Merchant, M.D.
Los Altos, California

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