Editorial Commentary: Anteromedial Femoral Socket Drilling in Anterior Cruciate Ligament Reconstruction … Love the Way You Are

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Abstract: The goal of the anterior cruciate ligament reconstruction is to avoid a permanent pivot shift. There are no significant differences in the clinical outcomes between performing anterior cruciate ligament reconstruction using anteromedial or transtibial technique in performing femoral socket. Although most previous studies have shown better results in avoiding pivot shift using the anteromedial technique, its clinical significance still needs to be determined and, in my opinion, the transtibial technique still remains the gold standard.

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In this issue of *Arthroscopy*, Eysturoy, Nielsen, and Lind[1] have published a study on the anteromedial portal for femoral tunnel drilling during anterior cruciate ligament reconstruction (ACLR): "Anteromedial Portal Drilling Yielded Better Survivorship of Anterior Cruciate Ligament Reconstructions When Comparing Recent Versus Early Surgeries With This Technique."

I have been invited to provide commentary on the subject of using anteromedial portal drilling for femoral tunnel and their relevance to anterior cruciate ligament (ACL) injury and reconstruction.

The authors in this article analyze the results of anteromedial femoral drilling in 2 historical periods (2007-2010 and 2012-2015) and compare the results with the transtibial technique in these historical periods. Data were extracted from the Danish registries and showed very interesting results also according to the high number of patients taken into consideration. Two endpoints were taken into consideration: ACL revision rate and objective and subjective clinical outcomes. This study found an increased risk of revision ACL and rotational and sagittal instability 1 year postoperatively for the anteromedial (AM) technique in the period from 2007 to 2010; however, there was no significant difference in revision surgery and objective measures between the techniques from 2012 to 2015. A higher activity level was nevertheless found in the AM group. The results could indicate that the results found in the period 2007 to 2010 may have been caused by a learning curve when introducing a new and more complex procedure (AM).

Regarding ACLR, we have to accept that we are never as satisfied as we would like. In many cases, there is failure to avoid the pivot shift, which is the target of the surgery. A persistent pivot shift after ACLR has been shown clinically postoperatively,[2] in vitro,[3] intraoperatively,[4] and in a study of in vivo kinematics using "dynamic" weight-bearing magnetic resonance imaging in apparently successful cases postoperatively.[5]

Current trends in ACLR include using a more obliquely oriented femoral tunnel to place the graft in a more anatomic position on the lateral femoral condyle and provide increased rotational stability; this need arises from the recognized role of the anteromedial bundle in rotational stability. This has led today to leave what, until 10 years ago, was the most traveled road, the transtibial technique, in favor of using the anteromedial technique. In fact, more important data that emerged from the study of Eysturoy et al.[1] is that between the first and second period studied, there is an important tendency to abandon the transtibial technique for the anteromedial one. The authors show that the AM technique has gone from being used in 11% of all ACLRs in 2007 to 87% in 2015. The transtibial

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technique has gone from being used in 88% in all ACLRs in 2007 to 12% from 2012 to 2015. Does it really make sense to change the surgical technique to achieve overlapping results?

My father always told me, "Who leaves the old road to the new one knows what he leaves and does not know what he finds." It is right to try improving our results, but are we sure that it is not possible to reach the anatomy with the transtibial technique? The mentor of this technique, Bernard Bach, has been committed over time to make us understand how it is possible to achieve the anatomy also through the transtibial technique.[6] The important thing is to know the risks and know how to avoid them.[7] In my clinical practice, I consistently follow the dictates of Bach; obviously, to reach the anatomy we have to risk a little. To obtain a more anatomic femoral tunnel, a tibial tunnel with a more oblique position must be performed, thus risking a compromise of the tibial plateau. Moreover, as described also by Youm et al.,[8] we must have some extra measures and stress the knee in varus and carry out an internal rotation of the tibia to try to go to a more anatomic position.

The correct positioning of the femoral tunnel is essential for achieving good results. In both cases, the essential thing is that the technique is done the correct way. In all the studies published that compare the 2 techniques, in my opinion, there is a confounding bias because of the concomitant factors that can affect the residual pivot shift. One example is the posterior tibial slope, varus malalignment, and the function of the anterolateral ligament[9]; therefore, I would like to congratulate our Danish colleagues for a very interesting study. I believe that the use of registers in the future will give us a huge hand, and I would say that the goal of this surgery, the abolition of the pivot shift, can be obtained with both anteromedial and transtibial techniques if correctly performed. Attention should be paid to patients with a residual pivot shift to factors not directly dependent on the anterior cruciate ligament but that may influence its function. We must follow the teachings of those who invented different techniques and learn all the tips and tricks to avoid complications and the presence of a residual pivot shift; therefore, love your teacher's way and make it perfect.

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