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EDITORIAL

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Thermal shrinkage of the anterior cruciate ligament: any good?

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In this issue Drs. Spahn and Schindler from Eisenach, Germany, report good results with bipolar electromagnetic shrinkage of elongated ACL reconstructions. They state that they performed this solely on patients who had undergone an ACL reconstruction that was "isometrically" placed, and in whom they found a ligament in good condition but elongated and nonfunctional. Their own article contradicts this statement slightly. They mention namely that they performed three excisions of cyclops formations and two notchplasties. These are usually due to the tibial tunnel being placed too anteriorly. Their follow-up time was also very short – 9 months. In spite of this it is interesting that they report such good results. We know from the shoulder that capsular shrinkage seems to work, at least in a certain proportion of cases. It would be excellent if one could also use this technique to shrink ligaments.

Since I have heard other opinions about shrinkage of the ACL, I contacted Professor Bellemans and colleagues in Leuven, Belgium, who have a certain experience. Interestingly, they have also treated 14 cases similar to those of Spahn and Schindler. In their hands the procedure has been successful in only 6 of the 14 cases, while 8 were regarded as failures.

Why this difference? It may depend on different techniques or on different conditions of the grafts that were treated. I would like to see a prospective study reporting the correlation between the results of shrinkage and the microscopic picture from the treated graft. If a biopsy specimen was taken at the time of treatment and investigated by both light- and electronic microscopy, we might be able to determine which graft reacts favorably to thermal shrinkage, and which structures do not improve on this treatment.

Finally it must be stressed that if the earlier reconstruction was not performed anatomically, a shrinkage might improve the situation on the operating table, although the ligament would eventually elongate or tear in the future.