

Editorial Commentary: Thermal Pie-Crusting the Hip Capsule Improves Exposure: But Is it Safe?



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Abstract: Thermal pie-crusting of the capsule can increase hip arthroscopy surgical exposure in the peripheral compartment. Recent time-zero biomechanical research suggests that repairing the capsule after pie-crusting yields similar strength and increased stiffness when compared to a T-capsulotomy. However, the risks of thermal damage to the capsule should be weighed against the biomechanical advantages of repairing a pie-crusting capsule versus a T-capsulotomized capsule. In addition, if a surgeon wants to inject an intra-articular orthobiologic such as platelet-rich plasma (PRP), I would not recommend pie-crusting because the full-thickness slits in the capsule could allow the PRP to escape, even after capsular repair. I will still use traction sutures for 100% of my hip arthroscopy procedures. However, in the very rare setting when traction sutures alone yield inadequate exposure, I will perform pie-crusting instead of a T-capsulotomy.

See related article on page 2832

Hip arthroscopy is not easy. Improving access for hip arthroscopy is as easy as pie (-crusting). But is it better? The hip is a tight, deep joint. The skin incisions are farther away from the joint than those in knee, shoulder or elbow arthroscopy. Any technique that can make this procedure easier and less traumatic for the patient is enticing. "Pie-Crusting Capsulotomy Provides Similar Visualization with Increased Repair Stiffness Compared to a T-Capsulotomy: A Biomechanical Study"¹ by Wydra, Al'Khafaji, Haruno, Chahla, Nelson, Gerhardt, and Metzger describes a procedure that can make visualization in cam-type femoroacetabular impingement (FAI) simpler and easier.

I must admit that upon reading of this technique, I had a visceral negative reaction. Radiofrequency to the capsule? No thank you. We went down that road with shoulder thermal capsulorrhaphy. Initially, there was great enthusiasm for thermal capsulorrhaphy,² but it quickly curdled when chondrolysis was identified as a complication.³ However, I fought through my initial bias. I recently advocated *not* equating the hip joint with the shoulder joint,⁴ and my gut reaction was doing just

that. (I hate hypocrisy, especially in myself!) I thought and pondered more. The hip joint capsule is thicker than the shoulder,^{5,6} so thermal energy may be less damaging to a hip than to a shoulder. Also, unlike a thermal capsulorrhaphy, which attempts to "shrink" the capsule, a pie-crusting technique is more limited in scope.

Repairing a capsule after pie-crusting yields similar strength and increased stiffness when compared to a T-capsulotomy, so if a surgeon routinely does a T-capsulotomy, switching to a pie-crusting technique makes sense. However, if surgeon wants to use an intra-articular orthobiologic such as platelet-rich plasma, I would not recommend pie-crusting because the full-thickness slits in the capsule would probably allow the platelet-rich plasma to escape, even after capsular repair.

The extraordinary, recently departed Dr. Howard Sweeney was a mentor of mine.⁷ As an accomplished surgeon, he had a wealth of expertise and experience, yet he was constantly learning and striving to improve. He was open to new ideas and procedures, and he could analyze them through the lens of his formidable fund of knowledge to form his opinions. Some new procedures are beneficial; some are not. For me, I will still use traction sutures for 100% of my hip arthroscopy procedures. However, in the very rare setting where traction sutures alone yield inadequate exposure, I will perform pie-crusting instead of a

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T-capsulotomy. I think that is what Dr. Sweeney would have done.

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