

Editorial Commentary: To Scope or Not to Scope a Patient With Tönnis Grade 2 Hip Osteoarthritis Remains Ambiguous



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Abstract: Hip arthroscopy for patients with Tönnis grade 0 or grade 1 hip osteoarthritis and femoroacetabular impingement has been clearly shown to be of benefit, but in patients with definitive joint space narrowing and sclerosis (Tönnis grade 2 or greater hip osteoarthritis), the benefits of hip arthroscopy are ambiguous. There are limited studies on the results of surgery for this combination, and the current research that exists is contradictory. To further confound the question, the Tönnis classification itself shows varying degrees of inter- and intraobserver reliability. One surgeon's Tönnis grade 2 could be another's Tönnis grade 3. In the end, shared decision-making between the surgeon and patients is required when faced with limited research data.

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To scope a hip with arthritic changes, or not to scope, that is the question. With apologies to Shakespeare, this dilemma has vexed surgeons since the beginnings of hip arthroscopy. A surgeon uses a multitude of criteria to determine the appropriateness of surgical intervention: symptoms, lack of response to conservative treatment, comorbidities, and the like. However, a lot of times it comes down to the radiograph. Is there too much arthritis to make a difference? Sadly, "Inconclusive and Contradictory Evidence for Outcomes Following Hip Arthroscopy in Patients With Femoroacetabular Impingement and Tönnis Grade 2 Osteoarthritis or Greater: A Systematic Review"¹ by Andronic, Claydon, Cubberley, Karczeqski, Kumar, and Khanduja unapologetically does not give an answer.

It's not like the authors did not try. They did an extensive database search, and started out with more than 6,000 studies culled to 299 full-text papers to

review, leading to 11 papers eligible for the study (6 were Level III evidence, and 5 were Level IV). The studies had varying degrees of potential bias. The results of femoroacetabular impingement surgery in patients with arthritic changes were all over the map, with one study showing a 6% conversion rate to hip replacement and another with a conversion rate of 45%. Four studies noted improvements in patient-reported outcomes, and 2 showed relatively dismal results.

In addition, the Tönnis classification itself is, shall we say, flexible. While the authors cited a study that showed an interobserver reliability of 0.74 and intraobserver reliability of 0.73,² another recent study showed an interobserver reliability of 0.287 and intraobserver reliability of 0.472.³ Perhaps the Swiss are better at grading hip arthritis than others? For those keeping score at home, a kappa value of less than 0.6 means that one-half the data may be incorrect.⁴ So, is this systematic review even comparing apples to apples? If there was a Tönnis 2.5 hip, that could be a Tönnis 2 for one surgeon and a Tönnis 3 for another. Perhaps other factors, such as experience, are swaying how the surgeon reads the radiographs—one performs hip arthroscopy based on the radiograph, and the other declares that surgery is not indicated based on the radiograph.

There is an obvious need for better studies to inform decision-making when there is concomitant femoroacetabular impingement and noticeable hip arthritis.

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Patients with Tönnis 0 and 1 hips have been clearly shown to benefit overall from hip arthroscopy,^{5,6} but with definitive joint space narrowing and sclerosis, there is no definitive answer. In my practice, I choose to embrace this ambiguity. I spend the extra time to talk with my patients about the dearth of data, and I make that part of our shared decision-making on whether hip arthroscopy makes sense for that patient. Yes, we need to strive for answers, but it is fine to be unsure in the moment. To quote Bertrand Russell (who said this decades before the Dunning–Kruger effect paper⁷ was written), “The whole problem with the world is that fools and fanatics are always so certain of themselves, and wiser people so full of doubts.”

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