

Dr. Andrea Spiker...: Welcome everyone to the Arthroscopy Association's Arthroscopy Journal Podcast, I'm Dr. Andrea Spiker from the University of Wisconsin. Today I have the privilege of speaking with Dr. Thomas Youm, who is the Director of Hip Arthroscopy at the New York University Langone Orthopedic Hospital. Dr. Youm was the senior author of an article titled *Six Month Outcome Scores Predicts Short Term Outcomes After Hip Arthroscopy*, which was published in the October 2021 edition of the *Arthroscopy Journal*. Dr. Youm's co-authors include Charles Lin, Christopher Colasanti, and David Bloom. Welcome Dr. Youm, and thank you so much for joining me.

Dr. Thomas Youm: Thank you, Andrea. Thanks for having me on board.

Dr. Andrea Spiker...: Tom, can you start us off this morning by telling us a little bit about your practice and where this research question originated?

Dr. Thomas Youm: Sure. So I've been in practice for 16 years, fellowship trained in sports medicine. Did my fellowship out at Kerlan-Jobe Orthopaedic Clinic. I've been at NYU Langone Orthopedic Hospital ever since as an attending physician, director of hip arthroscopy and I also direct the hip arthroscopy research. My practice is on the upper east side where I practice sports medicine and a large part of my practice is seeing young adult hips, patients with labral tears and femoroacetabular impingement.

And over the years, I've probably been doing hip arthroscopy for about 10 years at this point. Over the years, we've taken notice of our patients as far as when they tend to do well and when they tend not to do well. And something that I noticed from my own experience is that patients who fared well early on after their surgery within the first few months tended to do better than patients who had somewhat of a slow recovery and did not feel significant benefit within the first few months. And so that's where the research question came about.

Dr. Andrea Spiker...: Great. That's an excellent application of what you're seeing in clinic to then backing it up with research. So in this study you use the modified Harris Hip Score, Patient-Reported Outcome Measure as a qualitative measure of patient improvement. You analyzed improvements in terms of the Minimally Clinically Important Difference or MCID, and The Patient Acceptable Symptomatic State or PASS. Can you discuss a little bit more the difference between the MCID and the PASS and why it's important to use these in a study like yours?

Dr. Thomas Youm: Sure. The MCID is the Minimally Clinically Important Difference and for the Modified Hip Harris Score to define is a change of eight points and essentially what it is, is the minimal difference in improvement that a patient perceives after surgery. And we use both the MCID and the PASS, the PASS is the Patient Acceptable Symptomatic State, and usually this is determined with an anchor question where you ask the patient, did the surgery give you significant benefit, or are you satisfied with the surgery? And I believe for Modified Hip Harris Score, the PASS has been determined to be a net score of 74, I believe.

- Dr. Andrea Spiker...: It's definitely a change from prior research which would just report on the numbers of patients' scores, which clinically didn't mean much to us. So I think the introduction of these various MCIDs, PASS, and then there's a Substantially Clinical Benefit or SCB as well. These really help us understand and put into context what these scores mean as we're reporting them, especially in research like yours.
- Dr. Thomas Youm: Yeah. No, I agree with that. I think especially in the last five years we're not just looking at overall outcomes. I think our orthopedic literature is full of studies, whether it's in the hip, shoulder or knees of patients doing well after surgery with excellent outcomes and 80% success. But it doesn't really describe exactly how they're doing meaning have they made some perceptible improvement? Are they satisfied? So there's an evolution of patient-reported outcomes that I think really is making our clinical practice better as we determine more of these details.
- Dr. Andrea Spiker...: Absolutely. So speaking of those patient-reported outcomes, what are some of the advantages versus advantages of using one of the more historically used scores such as the Modified Harris Hip Score as the focus of your study?
- Dr. Thomas Youm: Yeah, so the Modified Hip Harris Score it's a double-edged sword because I've been doing hip scopes for a while, that's one of the early scores that we adopted as far as looking at hip arthroscopy performance. And as a result when we're doing our two year outcome studies, five year outcome studies, it's an outcome score that we continue to use. The downside of the Modified Harris Hip Score is that there's a ceiling effect, meaning that there are patients who get perfect scores on this and then if you have too many patients who get perfect scores, it's really hard to determine just how well patients are doing. So there are other scores out there. The downside of these other scores that have developed over to is that our preoperative scores from our databases oftentimes have not included these scores because they were adopted later on. So that's why I say there's some pros and cons with the Modified Harris Hip Score.
- Dr. Andrea Spiker...: Yeah, I would agree with you completely. I think in my own practice, one of the things that I deal with is whether to get rid of the Modified Harris Hip Score, but I agree with you completely that there are definite advantages to holding onto it, especially for that historical data. And you know there is the issue of questionnaire fatigue too. So the Modified Harris Hip Score is a relatively straight forward questionnaire for patients to answer. Now we have so many options that they can just stop answering questions because there are too many for them to answer. Fortunately, some of these newer outcome scores have been validated against the Modified Harris Hip Score. So I think providing results on this Patient-Reported Outcome Measure can be translatable to some of the newer ones in the future.

Dr. Thomas Youm: No, I agree. There's definitely an element of survey fatigue. We have our patients fill out forms when they come in as a new patient, and we have updates and then some of these hip outcome scores can be multiple pages. So for years I use the modified hip Harris score as well as the Nonarthritic Hip Score or the Bethesda score. But certainly I appreciate all the evolution and evaluating these scores and determining which ones have less of a ceiling effect.

Dr. Andrea Spiker...: And I think studies like yours go to helping us better understand some of the results from these scores as well. And in fact, one of the conclusions that your study made was that the current MCID for the Modified Harris Hip Score which you mentioned as eight points had actually a relatively low specificity at determining whether the MCID was met at two years. So you instead used a higher MCID of 24 points, which significantly increased the specificity of predicting MCID at two years. So can you talk a little bit more about this change in the MCID I mean specifically the increase of 16 points used to define achieving MCID with this patient-reported outcome tool?

Dr. Thomas Youm: Yeah, because the MCID is the Minimal Clinically Important Difference, I don't think it's as good of a predictive tool or value because basically you're taking a patient as just throwing rough numbers out there may feel before surgery three out of 10, as far as the pain. And then they perceive that they may be feeling a five out of 10. And I don't think that always translates to how that patient is going to do down the line. So what we determine basic based on our numbers and research is that for this particular study, if you had an increase in your Modified Hip Harris Score of 24, that increased our sensitivity, or especially our specificity of predicting achievement of PASS at two years to 80%.

And if you just take away the concept of the MCID and PASS, and the numbers associated with it, I think it makes sense. I think you need to see a certain amount of clinical improvement or some factor of the MCID or multiple of the MCID to really determine if the patients will be satisfied later on. So I think the clinical conclusion here is that just a little bit of improvement doesn't always mean that they're going to do well two years down the line. But if you get a significant amount of clinical improvement or in-patient feels really good or really functional within the first six months after surgery, we're tending to see those are the happy patients at two years.

Dr. Andrea Spiker...: And that leads perfectly into my next question, which is to ask you to just highlight the main conclusion of this study, and then discuss a little about how you're going to apply this to your own practice?

Dr. Thomas Youm: Yeah. So the main conclusion of the study is that if patients are not doing well in the first six months, meaning they have not reached some level of improvement or MCID it's unlikely that they will do well or be satisfied with their surgery at two years. And the converse of that is true as well. If the patient has met some significant improvement, whether it's the MCID or the cutoff of 24 points of improvement that we found for specificity, patients tend to continue to do very

well. And how that applies clinically is that we follow our patients for two years after hip arthroscopy. I follow them a week after surgery, two months, four months, six months, one year and two years. And we certainly have our slow healers where we tell them based on prior research that it may take two years to get better.

It may take a year to feel 80%, two years to feel 100%. We all have our different ways of talking to our patients as far as expectations. What this study does for me clinically is that it opens my eyes a little earlier. So we've had six months a patient that I operated on is not really had much improvement and patients will be very frank if they don't feel much better after surgery, gets me thinking maybe I should get an MRI at that point, instead of waiting on that imaging for a year or two years, hoping that they will get better than coming up with more answers for them rather than dealing with the frustration of the patient, feels like the surgery did not work. And there will always be patients who just heal slowly but I think this study shows that it may be warranted to get some clinical imaging after six months, if you don't see significant improvement in the patient, whether that's to look for not healing of the labrum, residual impingement, some progression of articular cartilage damage. I think those things become warranted.

Dr. Andrea Spiker...: Yeah, that's excellent. I think that's very helpful in our treatment of these patients who are not achieving the desired recovery at that time point. Now, one group of patients that you excluded from this study was anyone who had had a prior hip arthroscopy, so revision hip arthroscopy patients. How do you think the results might be different in this group of patients?

Dr. Thomas Youm: Yeah. I think the results would be different and similar. So similar in the sense that patients that I do revision hip arthroscopy, and we probably need to add revision hip arthroscopy with labral repair versus reconstruction considering the trends of where our field is gone. But in that cohort which I have not studied yet, I would say my feeling is that patients who do well at the revision hip arthroscopy also know that they have improved relatively early on. And patients in my experience who don't feel well within the first six months after their revision probably will continue not to feel well, but that's something that hopefully we'll get the numbers to do later on.

Dr. Andrea Spiker...: Absolutely. And I wonder also if there's a component of revision patients in general being more of that slow healing group, simply because they've had surgery before. And so the question of whether six months is actually eight months in that patient population will be interesting to see.

Dr. Thomas Youm: Yeah, I think that's a really good point, Andrea. When I counsel patients and talk about expectations after surgery, I usually tell them to add 50% of healing time for revision surgery. So my standard conversation is for our patients to feel 80% improved after six months and continue to feel 100% after a year. And to add

50% of time period to that so, you know nine months, for example, for a revision hip arthroscopy to feel 80%.

Dr. Andrea Spiker...: Yeah, definitely an important distinction to make between the primary and the revision hip arthroscopy. So there's also been some prior disagreements in the importance of preoperative outcome scores achieved by patients. So some of the prior studies, for example, have shown that those with a higher preoperative patient reported outcome score do better after surgery. And then others on the flip side have shown that those with lower preoperative patient reported outcomes do better. So can you discuss what you found related to the baseline patient reported outcome measure and how those patients did after surgery? And why do you think that you found that?

Dr. Thomas Youm: Yeah, that's a good question. We found in our study that patients with lower preoperative outcome scores did better after surgery than patients with higher preoperative outcome scores. I think the main cause of that is the average age of our studied population, which was in the high 30s and low 40, right around that 38 to 48 range, I think. And this I probably can't say for sure, but this is my feeling based on my grasp of our current literature is that when patients have higher preoperative outcome scores and are younger, for example, the 18 year old collegiate player with FAI, I think they will tend to do better afterwards. But it may be an age-related difference when you have a 38, 40 year old who was high functioning in running and yoga.

They may not as much of a difference after surgery as somebody who perhaps couldn't sleep at night or couldn't sit to work, or somebody who had dysfunction throughout their daily activities of living versus a high functioning athlete. So I think both are true and both have been shown by the literature I think patients with higher preoperative outcome scores have been shown to do better than lower preoperative outcome scores. And I wonder if something has to do with the age and activity level of these patients, that's kind of where I'm thinking.

Dr. Andrea Spiker...: Okay. Absolutely. And one other interesting thing I found that even though there was a difference in the age between those two groups who did well at six months and who didn't, there was actually no statistical difference in your cohort. But you did find a difference based on body mass index and also on right hips. So can you just discuss a little bit about what your thoughts are on those findings?

Dr. Thomas Youm: Yes. The body mass index you know I think we published a study in hip arthroscopy a while ago looking at high BMIs and said at two years patients did well, but I think there's also literature out there that shows that patients with higher body mass index may do more poorly. Maybe at the fitness level their preoperative functioning, but they don't do quite as well has been my experience, whether that's clinically significant or not I think in this paper, there was some clinical significance. I can't explain the right hip. I think that's just one

of those random things that shows statistical importance. Certainly I don't have a right hip practice or left hip practice. Being right-handed I would love a right hip practice. I think those of us who do hip arthroscopy know exactly what that means, but yeah, I think that's more of a random finding that we found.

Dr. Andrea Spiker...: Great. Well, thank you so much, Dr. Youm, for sharing your thoughts with us, it has been a pleasure speaking with you,

Dr. Thomas Youm: Andrea, thank you so much. Thank you for having me on and enjoy the rest of the week.

Dr. Andrea Spiker...: Dr. Youm's article titled *Six Month Outcome Scores Predicts Short Term Outcomes After Hip Arthroscopy* can be found in the October 2021 issue of the *Arthroscopy Journal* or online at [www.arthroscopyjournal.org](http://www.arthroscopyjournal.org). This concludes our episode of the Arthroscopy Journal Podcast. Thank you for joining us. The views expressed in this podcast do not necessarily represent the views of the Arthroscopy Association or the Arthroscopy Journal.