

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 am joined by Dr. Andrew Jimenez, who is a sports medicine and hip preservation surgeon at Yale University. Dr. Jimenez was the first author of the article titled Athletes Undergoing Concomitant Hip Arthroscopy and Periacetabular Osteotomy Demonstrate Greater Than 80% Return-to-Sport Rate at 2-Year Minimum Follow-Up, which was published in the September 2022 edition of the Arthroscopy Journal. Welcome, Dr. Jimenez and thank you so much for joining me.

Dr. Andrew Jimenez:

Yep, thanks for having me.

Dr. Andrea Spiker:

Andrew, to start our discussion, will you tell us a little bit about your practice and your journey into the field of hip preservation?

Dr. Andrew Jimenez:

I'm early in practice right now. I'm starting my second year in practice over at Yale University. In terms of my journey into hip preservation, I did a sports fellowship at the University of Connecticut and got great experience in generalized sports and hip arthroscopy there. And then I think wanted to take it to the next level and get a little bit more in depth in terms of hip preservation experience. And I think to do that, at least for me, the right move was to do a dedicated year of training in hip preservation surgery. So I did a second fellowship in hip preservation surgery at Ben Domb out at the American Hip Institute in Chicago.

Dr. Andrea Spiker:

That's great. And that as you know, is the same path that I took. So I think more and more you're finding more of us in the world of hip preservation who have done the sports fellowship first and then hip preservation second. If not some other fellowship prior to the hip preservation fellowship.

Dr. Andrew Jimenez:

But I think it's an interesting thing with how sports medicine training is going and there's more of an emphasis on hip arthroscopy at a lot of places. And then the field of hip preservation is growing so much in terms of techniques and things like that. I think it may be harder and harder to get that comprehensive training just from a single year at a sports medicine fellowship. So for me it was definitely worth it to do the extra year.

Dr. Andrea Spiker:

Yeah, I agree. And it is interesting, some of those other fellowships that people will do before a hip preservation fellowship include pediatric, orthopedics, trauma. And so I think hip preservation itself has become a very multidisciplinary field, with all of these people collectively getting that hip preservation training but coming at it with various past expertise in other fields throughout orthopedic surgery. So very interesting to see where this field is going to go. So talking about your paper, can you give us a background on why you wanted to ask this clinical question of whether patients with a combined hip arthroscopy and periacetabular osteotomy return to sport and at what rate?

Dr. Andrew Jimenez:

Yeah, I think that in general, outcomes of athletes undergoing different hip preservation procedures is a little bit understudied. And we've looked into a lot in terms of athletes undergoing hip arthroscopy. And I think on the surface there may be some hesitancy among athletes to undergo or consider undergoing a PAO just because it seems like a more invasive procedure with maybe a tougher recovery. So I think that it's important to look at the outcomes of how athletes do in regards to undergoing this procedure. And then establishing return the sport rates and outcomes in these patients, we can better counsel our patients going forward because there's definitely going to be athletes that are not to be amenable to an arthroscopic procedure alone to get them back to the level that they want to get back to.

Dr. Andrea Spiker:

Absolutely. And you mentioned this in your paper, but yours was one of the very first papers to look at the return to sport rate after this combined hip arthroscopy and periacetabular osteotomy procedure. There've been a couple others that looked at how frequently athletes were returning to sport after the PAO. But it's interesting that this was the first time a publication had been done looking specifically at this combined procedure.

Dr. Andrew Jimenez:

I think the combined procedure is interesting. It's not necessarily right or wrong to do it, I don't think one way or the other. Where I trained, at the American Hip Institute where this paper is from, they prefer to do the combined procedure. I think it gave them better visualization of intra-articular pathology that they could treat at the same time as the PAO surgery, which is what their reasoning was for doing that. But I think, as established previously, their surgeons have had great outcomes in athletes as well with the PAO alone. So maybe not necessarily a right or wrong way to do it, but this is just the way that I had trained to do it. And I think we established pretty good outcomes in these patients.

Dr. Andrea Spiker:

Absolutely and I was very excited to read your paper because this is actually my preferred method as well. So I really do think that if a patient has intra-articular pathology in the setting of hip dysplasia that they should have both the combined hip arthroscopy and PAO at the same time. And admittedly this is a very controversial topic because there are well demonstrated outcomes with PAO alone. Although I might point out, and we'll talk about this a little bit later, your return to sport was higher than some of those previously reported outcomes with PAO alone and perhaps one might argue that that's because the hip arthroscopy was added to this procedure.

Dr. Andrew Jimenez:

It definitely could be. It gets you a good access to comprehensive evaluation of the intra-articular pathology. You can get a nice femoroplasty or cam correction if that's necessary and if that's indicated. At the same time, I'll admit that sometimes return to sport can be a somewhat ambiguous and heterogeneously evaluated outcome. I think Mark Safran has a paper from 2019 or 2020 on this in terms of all the different ways that folks define what return to sport means. But admittedly in this paper we did show a high return to sport rate of 80% and we had a heterogeneous cohort in terms of recreational amateur high school as well as collegiate level athletes. But that being said, we had a fair number of collegiate and high school athletes and we showed a very high return to sport rate in those patients as well. So I think that's an encouraging message that even in higher level collegiate level, high school level

athletes, you're still able to have favorable outcomes and very strong return to sport rates in that patient population.

Dr. Andrea Spiker:

Being in a sports medicine practice, I think we encounter this quite often that the PAO, the periacetabular osteotomy, is a surgery that is considered by many to be a career ending surgery for athletes. And so I think your paper and other papers have really proved that that's absolutely not the case. That it is a surgery that athletes can recover from and return to their level of activity. Though it does have a much longer recovery than a hip arthroscopy procedure alone would.

Dr. Andrew Jimenez:

Absolutely. I think it's a challenging conversation to have with an athlete because they may come in with preconceived notions of how they're going to do. So I think having more and more literature on this topic or in these patients could be helpful for counseling them, showing them that it's possible and that indicated case, you can still get a great result. Inevitably there's going to be some patients that are high level athletes or athletes really of any level that may not be able to get back just from a hip arthroscopy alone.

Dr. Andrea Spiker:

Exactly. So let's talk a little bit more about the periacetabular osteotomy. So as we're doing this Arthroscopy Journal podcast, this may not be immediately evident as a procedure that our listeners will often do themselves. However, I think it's extremely important for hip arthroscopist to be able to correctly identify and then refer patients who would be more appropriate for a periacetabular osteotomy. So can you take us briefly through your diagnostic approach to hip dysplasia and how you decide to indicate patients for either a PAO alone or a combined arthroscopic and open procedure?

Dr. Andrew Jimenez:

My evaluation basically is the same for any hip patient, but when evaluating dysplasia, we always get radiographic views of the hip and that includes measurement of angles like the LCEA or lateral center edge angle, the ACEA or anterior center edge angle. We'll measure the acetabular inclination, we'll take a look at the FEAR Index as well. Physical examination also comes into play in terms of evaluating for impingement test, signs of apprehension, evidence of generalized ligamentous laxity. We'll always get a Beighton score on all patients.

And then just like most patients, I'll get a MRI to evaluate for intraarticular pathology, check for things like a labral tear, could also evaluate for any evidence of cartilage injury or ligamentum teres injury as well with that. And then generally for these patients, I'll always get a preoperative CT scan and we'll do a femoral and aversion protocol, which we'll also evaluate femoral version as well. And patients that I think would benefit from having a PAO, we'll have them also see and be evaluated by one of my partners who does open hip surgery and would be doing the PAO portion of the surgery. And I think doing this, we have a nice kind of multidisciplinary approach and we have two folks that are looking at the patient and weighing in who are both experts in their respective areas. So that's the algorithm that I would typically go through.

Dr. Andrea Spiker:

Great. Now can you also discuss the logistics of these combined procedures? So when during the procedure do you do the hip arthroscopy first or second? Is it staged or non-staged? What is your preference?

Dr. Andrew Jimenez:

I do it the same way that I was trained with Ben Domb. So for me, I don't do the PAO portion of the procedure, so I would have to collaborate with one of my partners who does the open portion of the procedure. So we would generally find a day where both of us are available and have ample block time to do the surgery. We would generally do it all in one procedure, in one surgery. We would always start with the hip arthroscopy portion of the procedure first. That would be just on our standard traction table.

Once the hip arthroscopy portion was completed, so that would involve diagnostic arthroscopy, treatment of intraarticular pathology, possibly a femoroplasty if indicated, we would move on to the open portion of the procedure. That would generally involve transition to a flat top radiolucent table for the open portion of the procedure. And then once that occurs, my partner would come in and take over from there. One thing of note is that we would generally leave the capsule unrepaired from the arthroscopic portion and then just do an open plication at the time of the open surgery.

Dr. Andrea Spiker:

Thanks so much for taking us through that. It's really interesting because there are so many different ways to approach this and I think we've heard from many of our other colleagues, sometimes they will stage the procedure, do the hip arthroscopy one day and then two weeks later have the patient undergo a PAO. The various procedures actually performed during the arthroscopic portion of the surgery vary as well. So for me personally, I like to do the same as you describe, hip arthroscopy first, labral repair if necessary, any chondral treatment, femoroplasty if indicated, capsule closure arthroscopically because I happen to be the one who also does the PAO, it actually is faster for me to close the capsule arthroscopically and then I elevate the iliocapsularis as part of my dissection before doing the open PAO.

And speaking of where is this field going to go, I now do both portions of that procedure on the same traction table because the area of the pelvis is radiolucent. And so that saves quite a bit of time with the transition between one table to the other. But it's interesting because there's no wrong way to do this, as you mentioned. I think it has to do with what level of comfort the surgeons have. And then in your case, if you are the same surgeon doing the whole procedure versus a part of a team, things vary quite a bit. And I know open surgeons absolutely prefer the flat top table to the arthroscopic traction table when doing the open portion of the procedure as well.

Dr. Andrew Jimenez:

If working with another surgeon, it just help with the flexible and how to do things and what would expect for them I think is what I tried to accommodate too.

Dr. Andrea Spiker:

Absolutely. And speaking of that, when you're working with another surgeon who does the open portion of the procedure, what would you note as some of the technical tips and tricks that you've noted that you might change when you're doing the hip arthroscopy for a patient who is just about to undergo a PAO versus when you do the hip arthroscopy alone?

Dr. Andrew Jimenez:

There's some differences of course between those two. For one, starting off hip arthroscopy alone, I would do on an outpatient basis, come in and go home the same day. When I do hip arthroscopy with my partner with combined PAO, I will generally admit to the hospital for a night and then go home the next day. There are some challenges that can happen with this combined approach. It's a big surgery, so there's a lot of operative time. And in terms of the way we do it, there's a transition from one table to the other. There's going to be fluid extravasation from my arthroscopic portion, which can sometimes make the PAO portion a little bit more challenging. But I always try to move expeditiously as is feasible through the arthroscopic portion to try to mitigate that form. The other thing that comes into play is just logistics of two surgeons having time available, block time, things like that. And that coordination if you're working with two different surgeons adds another layer of difficulty versus just having a solo surgeon doing one or both procedures.

Dr. Andrea Spiker:

Absolutely. And that leads me to another question that I have for those listeners who are hip arthroscopists alone, but not themselves open hip preservation surgeons. What do you think are some of the things that you've found most helpful for setting up a collaborative approach to these patients who also need a PAO?

Dr. Andrew Jimenez:

If you do hip arthroscopy alone, I think it's important to realize that you're not going to be able to treat every pathology that you see with the hip arthroscopy just by itself. There's inevitably going to be some proportion of patients that are going to need open PAO surgery as well. So with that in mind, I think it's important to, if you don't do it yourself, to establish a relationship with another surgeon that does the open PAO surgery. I would say ideally that that surgery would be in the same institution as if that's not the case, then you could potentially establish a relationship with another surgeon in the area, in the region that you could collaborate with. And then if that's not possible, then I think it's important to establish a good relationship with someone that you can refer that patient to that is at a center that could handle doing those combined procedures.

Dr. Andrea Spiker:

Yeah. Excellent. So back to your study, can you summarize the general findings of the study, the results that you came upon, and then tell us how you're going to apply these or have applied these to your practice and to your education of trainees.

Dr. Andrew Jimenez:

The main finding of the paper is that athletes that undergo PAO surgery combined with hip arthroscopy, they had great, I would say favorable outcomes at minimum two year follow, up high rates of achieving psychometric thresholds. And overall the return, the return to sport rate was high at greater than 80%. We established an 82% rate in the paper. So I think that papers like this, and there's more work on this topic that needs to be done, but I think that this type of literature helps us when we're talking with these types of patients in our clinic and being able to show them hard evidence that it is possible to have a strong return to sport rate good outcomes. Even in those kind of higher demand athlete patients, they're undergoing the combined procedure. And I think having this literature out there may hopefully prevent the mistake of doing a scope alone when a scope alone is not indicated. Or trying to stretch the limits of arthroscopy alone when perhaps a PAO is indicated in that patient.

Dr. Andrea Spiker:

Yeah, that's an excellent summary, and you're absolutely right. I think that was one of the reasons I thought your paper made such an excellent statement is that we don't have to fear the PAO. That it is a surgery that if indicated, can help the patient get back to their desired level of pain free activity.

Dr. Andrew Jimenez:

Absolutely.

Dr. Andrea Spiker:

Well, thank you so much, Dr. Jimenez. Any final parting thoughts before we end our discussion today?

Dr. Andrew Jimenez:

No, I would say thanks a lot for having me on the call. It's been a pleasure chatting with you and I hope that this podcast is helpful and any other questions on the paper, anyone can feel free to reach out.

Dr. Andrea Spiker:

Thank you so much.

Dr. Jimenez's article titled, Athletes Undergoing Concomitant Hip Arthroscopy and Periacetabular Osteotomy Demonstrate Greater than 80% Return To Sport Rate at Two Year minimum Follow up can be found online at www.arthroscopyjournal.org. This concludes our episode of the Arthroscopy Journal podcast. Thanks so much for joining us. The views expressed in this podcast do not necessarily represent the views of the Arthroscopy Association or the Arthroscopy Journal.

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