

Sports Hernia (Part 1)

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--inguinal perspective, it is weakness or tearing of the posterior wall of the inguinal canal because there's more space in there. The canal is 50% reduced in size and space. ... so that tells you right there that there's going to be increased pressure in the canal supporting those structures, and assuming you have core muscles supporting that area. So that's why women are affected less from an inguinal perspective.

But a sports hernia, like we talked about, a lot of different terms. Other things-- automobile injuries, workers comp, yard work, brain injuries can happen anywhere. So a greater understanding of the functional anatomy, greater understanding how it works, and then how to treat these is very important. Twisting, cutting, kicking, physical contact-- there's probably some others. But those are certainly some of the bigger ones ... occurring.


I just came up with a little list here, going back, again, to you younger students that have had anatomy. These are the big ones that you need to know how to palpate. It's certainly awkward, especially for the students. If you get out, you don't want to be touching these things, obviously. But this rectus abdominis, psoas, pubic symphysis, ... fascial layer is gone. But really what that means is every single one of these muscles, right, have fascia.

But in the frontal anatomy perspective, you have very large aponeuroses around most of these structures, especially with external oblique that covers majority of the area overlying them. So this could be injured and torn as well. Conjoint tendon-- can anyone remember what the conjoint tendon is?

Common tentative structure of the transverse abdominis and an internal oblique. So when we have the inguinal canal, the borders of the inguinal canal are really the internal and external oblique, transverse abdominis on the bottom. So the bottom aspect of it is the inguinal ligament. What's the inguinal ligament? That's just the extension of the external oblique aponeurosis coming down as it folds over and creates this band of tissue that actually supports the bottom portion of the structure. You start ripping that, and you start getting bulges, and then therefore pain.

Of course, the internal and external oblique, gracilis, all these attachments have some direct influence on the pubic symphysis. So, yes, at times they're just hard to differentiate, palpating different structures. But you certainly can. And if you know the layers of what lies above and underneath these certain structures, you'll be able to perform your manual therapy from there.

So the inguinal canal itself is about 4 centimeters. It's not too long. Think of a giant, 4-centimeter straw. Obliquely, ... back posterior from the inguinal ligament, and again-- and in males, again, like I said, it's the spermatic cord and nervous system nerves to mainly to the testicles. In a woman, they're all ligaments in there as well. But as you look around, if you just look at where



the pubic bone is and where all the muscular attachments are, then you'll be able to get a greater appreciation.

Then there's something called a femoral hernia as well. And that's obviously dealing more on the nerve an artery going down. It's a little less common. Actually, that's the one that's more prevalent in women. I really couldn't find in the literature really necessarily why that's the case unless you have a bulge somewhere. Referring patterns of a hernia, even a sports hernia to some degree, but in a true hernia, if it's indirect or direct, a lot of the referral pain is obviously the testicles of males and the labia in females along with perinatal as well.

So when you have that in your examination, and they're telling you that type of pain and you look at the mechanism ... you can start kind of differentiating, is this a true, true inguinal hernia, or this is more of a sports hernia? So now we come to, again, what is it hernia. So the two studies I pass around for you guys to take pictures of and read are these two, the British Hernia Society, and that Doha agreement within the last couple of years.


Most of the other research that I saw was probably late '80s and '90s using terms like sports hernia. Then again, so in that non-descriptive term-- so this is where we're going of with, really, these two studies, so, again, within the last couple of years. So, basically, these two groups have gotten together and tried to come up with more descriptive terms, or a term that the vast majority of experts can kind of narrow down to help get a term that most people can know, understand, utilize, and create better outcomes in their patients that have pain in the groin.

So category 1-- and I like this classification system because it's what's descriptive, right? If we call it adductor-related groin pain, that tells us the adductors are the problem, right, or psoas, or inguinal or pubic related. So this is descriptive enough that we can say, OK, we can diagnose that lesion. We can still call it a sports hernia, and that's fine. But we could say an abductor-related sports hernia, or put whatever descriptor you want in there. But, again, we have a term that's telling us the injury or pathology is in this particular area.

The red number five, rectus abdominis external oblique, I put that one in there. That's, again, my opinion based on my experience, but also ... research, there's lots of studies that are talking about an external oblique. And we see this in sports all the time when the docs are diagnosing it as an abdominal strain, or something like that, or oblique strain.

Hear it all the time in the ... sports. You can classify that as a sports hernia. And so I just added that one into that area because it's more complete that way. Any questions so far? Am I making somewhat sense?

So I like that classification system. You can add stuff to that as well, as long as, again, the key is that your functional anatomy. You can examine well, you can palpate well, and-- and what did we learn in school, especially you younger? 90% of your diagnosis is based off history alone. Good. And you have your examination findings. And you could pinpoint



Category 2 of the agreement is hip-related stuff. So yeah. You can have hip-related sports hernia. You could have inguinal, all that kind of stuff. But the big ones here is ruling out FAI. So everybody heard that term so far, right? Becoming more and more common in the literature. We have one of our own Minnesota docs-- he's one of the world leaders, Dr. Larson, does these surgeries all the time, a lot of us practicing chiropractors in the field refer to Dr. Larson when we see this type of stuff.

And certainly, labral tears-- so the orthopedic tests for these types of lesions is sometimes based on solely your experience as well and how well you can do that. But I wish we had time today to go through some of that stuff and the treatment stuff that we ..., maybe another time and we could do that.

I do talk about this topic quite a bit in the ... course that I teach for the college ... for the practicing docs so when they do sports physicals and things like that, that they have this knowledge. Really, our true inguinal hernia-- a lot of students in here are probably not at the level yet they would have this is the coursework.


Just as a funny side comment of checking for hernias-- and you may have to do this. If you're going to do sports physicals, are you going to have to touch people's testicles? Probably. But you'll have to do the whole turn your head and talk check. So pay attention in class because you're doing sports stuff, you're probably going to have to do that at some point. But what is the purpose of turning your head during a cough?

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There you go. I was asked that once in the PDE class I was talking about. ... They thought it was something with one testicle lower than the other. No, ... So you've got to kind of get up in there and just see if you feel it a bulge in there. So there's a lot of online tutorials on that as well. And if you don't know how to do it, or you need a refresher on that, probably highly suggest looking some of those up.

And, of course, ... ruling out degenerative joint disease and things like that. Just remember, arthritis is not the engaged specific problem, right? We see this in athletes all the time or ... all the time. And certainly, once you have an actuary, they can start doing the measurements of the femoral angle and the acetabulum to start thinking down the road if it is an FIA lesion or not based on actual findings that way. So don't be afraid to be imaging these hips, even in very young.

Also, I do a lot of gymnastics work. FAI is rampant in gymnastics. It's normally why they have hip pain. But there's another reason why most gymnasts have trouble doing splits. And I know that sounds weird, but most of them can't because of the way their hips are formed. Rule out slipped capital femoral epiphysis. So there's different disorders that way.



Category 3, we can go through the whole list, but there are lots of other things to be considering. Even I've seen several groin cases that ended up being endometriosis, even in a young female athlete. So just look through all the different possibilities. If you're examine diagnosis isn't making sense, or your finding more

Then the other one is the British hernia society position statement. So they came up with the term inguinal disruption. And, as I like the definition of it, and it's still, when you hear that term, it is still not a descriptor, right? It tells us, you're a little bit more common, that it's part of the inguinal part. But it's still not descriptive. So it still could be lots of things.

And remember, groin pain, you're probably potentially going to have multiple lesions. It's normally not an isolated, high ... or this is torn, or this are frayed. In many cases, you're going to have multiple areas of the structure. A lot of the surgeries that are happening today, they'll have a labral tear, they'll have FAI, they'll have a true hernia.


So most of the time, what are they doing? They signify that there is a sports hernia. They go into the posterior wall. They put mesh in there. So they open you up a little bit. They put mesh back there, super glue everything back in to strengthen up that posterior wall.

And then they're coming down when there's an abductor problem. They'll actually release the adductor ..., or at least part of it to stop the abnormal forces that are pulling down on the pubic So that's more on the theories of what's happening. And most of the groin pain is that you have tight and weakened abductors pulling this way, and that abnormal tension in the inguinal canal, or around it coming in the other direction putting the shearing forces on a pubic bone. And that's where a lot of the injuries and pain is actually coming from.

But the definition, inguinal disruption, defined as pain to be either insidious or acute onset, which occurs predominantly in the groin area near the pubic tubercle ... pubic tubercle. A lot of stuff attached So it's just lateral, basically, to the pubic symphysis.

And that's where the ... tendon is attaching into the abductor longus. It's a very important part. So most of the diagnosis is when there is pain, dysfunction, swelling, a bulge at the pubic tubercle, you shouldn't start being concerned that there is some kind of groin pain or groin injury because there is, again, a lot of attachment to that

Where no obvious pathology, such as a hernia, exists to explain the symptoms. So what do you do in this case? I would start by checking, do they have a true inguinal hernia. Do they turn your head or cough? And basically, you'd do the same to a female as well. You'd just get up in that external ring of the inguinal canal, cough, bear down, Valsalva, something to increase the pressure, see if they need to actually feel a bulge or not, and then go from there.



Then start your palpation of our list of anatomical structures. Is it painful? Muscle-- test them all-- that's the standard there, is a lot of these tissues that have disruption in there, and be painful and resist emulsion.

Sports hernia, generally-- if it's a sports hernia, generally, you're going to be pain-free at rest and symptomatic with exercise. A true inguinal hernia is both. And you're going to have pain all the time. You're going to have painful urination. You're going to have painful bearing down. Just lay there is going to hurt. So that's one of the differentiating factors with that you can consider that way.

And certainly, and ask the genitourinary system on these patients, they're having trouble with urination, ejaculation, erections in males, those kind of things, because, again, the spermatic cord and nerves are going to be compressed if there's a true inguinal hernia in there.

So, again, I like the description part of that. But, again, it could be a little bit more descriptive. You could add to your descriptor on that if we're using that. But, again, these are the two main current studies for the last few years under consensus. Having the concussion, the consistence panel meets every couple of years on that. Actually, it's October of this year. I forget where it's at. ... remember ... somewhere in Europe, that they're going to be coming out with a new one, hopefully not a ... But they're going to be meeting to do that.


This group is starting to do the same thing every couple of years. They're getting together, look at the current research. What are some research studies that could be done, hopefully getting a body of knowledge make this topic a little bit more clear cut

So when we're talking inguinal disruption, so I guess put these five in your memory bank. So what do you do at school when you're trying to learn how to adjust? You go to your friends, your families, and they're your guinea pigs, right?

Well, now you get to go home and practice you're hernia checks, your friends, your family-- that's a little weird. Full practice checking hernias, practice palpating, the close-knit structures of the groin. I was giving this talk a couple years ago for the And it was funny because this woman, as I was talking about hernias and groins, she goes, well, women don't get groin pain.

And I said, what do you mean? And she goes, well, we're women. We don't have a groin. I said, no, you don't have testicles. You do have a groin. ... get a groin Oh. So maybe I think she kind of skipped anatomy class that month.

So what pinpoint tenderness more than a pubic tubercle? Again, lots of insertions are the biggest one ... because, again, transverse abdominus, internal oblique are pretty important structures to stabilize lots of anatomical structures inside. Those are torn, you're going to be hurting pretty bad.



Two, palpable tenderness over the deep inguinal array. So you had that two, right, that 4-centimeter inguinal canal right inside internal ring. Deep ring or superficial ring is on the outside. That's where we get up in the groin and feel that hollow spot. Turn your head and cough, you can feel the bulge.

Great pain from the external array with no obvious hernia. So, again, obviously, there's a bulge. You're probably going to refer that out, someone to do an ultrasound or something, or maybe an MRI, or something to look at the inguinal canal, see if there is a bulge in that. If there is no hernia, you can kind of go in on that sports hernia route, or whatever we're calling it, or inguinal disruption, or the other classification system.

For pain at the origin of the adductor longus, again, that origin is also the pubic tubercle or whereabouts. It's a pretty broad attachment ..., obviously are pretty strong pullers of the pelvis and cubic synthesis. A five-- dull diffused pain in the groin. We're referring pain to different areas. There's another one.

Now, that could be that it's an inguinal hernia. It could be a possible non-descriptive inguinal disruption, or whatever we're going to call it as well. But what are you going to do? You're going to go back to do your-- you want to check external ring, turn your head and cough, and those type of maneuvers to see if you feel a bulge.


Now, you can also feel bulges in the sports hernia as well. But it's not going to be in an inguinal canal. If you feel at bulge in an inguinal canal, or you're going up 4 centimeters, and you feel a bulge where you think an internal hernia is, yeah, you have to go, until proven otherwise, you have to assume that it's an inguinal hernia.

Now, can you have an inguinal hernia and sports hernia at the same time? Well, of course, you can. You can have lots of things. There's football players that ripped the abductors right off their pubic synthesis. That is a career-ender there, typically. So you can have multiple things going on.

There's lots of exam stuff. And I didn't put everything in here. And this is my take on it, because what do-- traditionally, if you have a sports hernia, and it's been diagnosed, what's done? Having the standard affair is then you go and do physical therapy, physical rehabilitation, or whatever they call that. And you try that for one to two months.

And if pain subsides, there's probably not going to be surgery right away. Most of the work that's being done is generalized core work and those kind of things. I think since we're all a little bit higher level than just doing coursework in here, it is that we can expand it greatly. So and students are a lot different now than when we went through, that there's so many more options of fine tuning your exam in terms of functional anatomy and functional assessment.

So what I would also as part of your inguinal assessment, your palpation assessment, your orthopedic test, hip range of motion, those type of things, and figure out ... are you suspecting



any labial tearing there, let's just run them through functional screens. There's lots of great stuff out there in terms of specific type work ... FMS. We've got the NASM corrective exercise model we go by, the functional foundation training-- there's lots and lots of groups out there.

They're all good. My take on all that is it doesn't matter which one you use. What matters is that you master functional anatomy. So here in school we've certainly learned anatomy to a point. You're a lifelong learner when it comes to anatomy. But the functional stuff is where it's all at.

So when you're examining people that-- I'm a big squat guy and one-legged squat. I could tell pretty much everything I need to know out of those two things. And so what does the functional assessments actually do for something like this? It really tells us that we can pinpoint down what the underlying imbalance is.

So in squat tests, we see four different lesions of some type of external rotation, or forward lean, or how they put one to one side, we can pinpoint exactly what is weak, what's too tight, because that's important when we're talking about sports hernias. Because you get any deviation from a squat, there's got to be pelvic and pubic bone synthesis deviation, right, or compensation somewhere.

So using those type of tests, can-- may not go, you have a groin injury, sports hernia, inguinal disruption, whatever we're calling it at this particular spot. But it does fine tune it down to say, OK, now I'm in a general area. I'm going to go to my palpation skills, orthopedic tests, all those type of things to, again, narrow it down.

Once you have it narrowed down, then-- I don't think there's an inguinal hernia, I think this is more of a sports hernia in there, then we'll talk about treatment in a second. We can go into that route. If it works and they're getting better, hallelujah. If they don't, in a reasonable period of time through your treatment, you can refer them away to get your second opinion, or you can treat first and see if they improve.

It also depends on the athlete, right? Well, not necessarily who they are, but what sport they are and at what level. If they're a high level athlete, they're probably most likely going to do surgery anyway and rehab after. The goal ... talk about only about 60% are getting surgery, and surgery treatment is effective. And here I do the same exact thing after surgery.

So regardless if they get surgery or not, you're still going to do all the ... we just talked about. You're going to do all the same treatment probably in both surgery depending on But, again, muscle tests, or do any type of resistance stuff, they're going to have pain on the affected tear, right?