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Soccer Injuries and How to Treat Them

WHAT ARE THE LATEST STRATEGIES FOR TREATING AND PREVENTING THE TYPES OF INJURIES ENCOUNTERED BY PROFESSIONAL SOCCER PLAYERS?

Welcome to the breakthroughs in sports medicine on ReachMD XM 157. I am your host, Dr. Sherwin Ho, and joining us today to discuss treatment and prevention of injuries for a league soccer players is Dr. Riley Williams. Dr. Williams is an associate professor of orthopedic surgery at the Weill Medical College at Cornell University. He is also the director of the institute for chronic repair at the hospital for special surgery in New York City. Dr. Riley shares a key position for several sports teams including the New Jersey Nets and the New York Red Bulls, professional soccer team in New York City.

DR. SHERWIN HO:

Welcome Dr. Williams!

DR. WILLIAMS:

Thank you Dr. Ho. It is a pleasure to be here.

DR. SHERWIN HO:

Dr. Williams, how long have you been team physician with the Red Bulls?

DR. WILLIAMS:

I have been team physician for the Red Bulls currently on in my third year, and with the Nets this is my fourth year.

DR. SHERWIN HO:

And I know you have also been involved with the professional baseball and football teams there in New York, they have a few.

DR. WILLIAMS:

Yeah, I have been fairly lucky in my travels to have spent some time with the New York Giants football team as well as the New York Metropolitan baseball team, so I have been around the blocks so to speak in New York City.

DR. SHERWIN HO:

And you yourself are an avid runner. You are part of the New York Roadrunners Club.

DR. WILLIAMS:

Yeah, I participate in about 8 to 10 races a year and also I have sort of taken up a little bit of cycling to give my knees a little bit of break. Take my own advice so to speak for patients.

DR. SHERWIN HO:

In your experience as a sports medicine physician, particularly with the league soccer players, what are some of the more common and difficult injuries to treat?

DR. WILLIAMS:

Most of the injuries that we encounter quite intuitively involve the legs, the ankles, specifically lots of foot and ankle sprains. Sprains about the knee, actually not as many catastrophic ligament injuries to the knee itself as one might imagine given the frequency of pivoting and shifting it with this sport, but ACL ruptures certainly are part of things, medial collateral ligament ruptures in addition are also fairly common, meniscus tears, and one of probably the more common injuries we see are lots of strains and muscles tears about the groin and hip, adductor strains, the strains of the hamstring and really quite almost to epidemic proportions. The sort of vague and poorly understood sports hernia is one of the things that we have been encountering nearly 3 to 4 times a year in a rather small club.

DR. SHERWIN HO:

Well, that is interesting, you should bring that up. I think, most of the audience, most of the primary care doctors out there read about and see a lot about the ACL tear that knocks a guy out for a season, but it seems other injuries that you and I know are so difficult to deal with and can ruin much of an athlete's season, and I think the groin pull and then moving on to the sports hernia, those can be the bane of the team physician. Why don't you explain a little bit about what the sports hernia is to our audience?

DR. WILLIAMS:

As a basis, everyone is, I think, for the most part familiar with a regular hernia or an inguinal hernia, which affects basically a relatively well-known weak spot in the abdominal wall down to the pubis. This is a little bit higher. It really has more to do with the weakness in the anterior abdominal wall, right at the level of the pelvic girdle right in front involving typically the rectus abdominus muscle. It is a really hard injury to diagnose. Patients or the athletes usually will complain of a very vague sense of discomfort, which is progressive and in

the beginning it is usually not causing substantial amount of pain such that the athlete would want to discontinue activities, but it becomes progressive and fairly fulminant in MRIs and ultrasounds and CT scans of imaging modalities, they are really not all that effective nor they validate in the diagnosis of this injury.

DR. SHERWIN HO:

I think it often times becomes almost a diagnosis of exclusion after you have ruled out the more common thing such as a groin pull, you know, the groin strain so to speak.

DR. WILLIAMS:

Exactly.

DR. SHERWIN HO:

Well, let us back up a bit. How would that present in one of your soccer players, typically for our audience?

DR. WILLIAMS:

Typically, they will complain of pain about the mid to lower abdominal cavity or abdominal wall, not really down near the inguinal canal or the pubic or the genitalia. It is really substantially higher, I would say on average somewhere between 8 to 10 cm above the pubic symphysis or the front of the pelvis. It would be typically after training where they are doing a lot of truncal rotation type stuffs or may be after a long game or a long practice. It really again come in very vague. You will have them do all the typical kind of diagnostic of Valsalva maneuver and you will have them bear down, it really does not have much of an affect on this in terms of worsening the symptoms, but they will be tender to the touch on exam, again on the anterior abdominal wall. You typically will not feel a defect. You will not feel anything that would suggest that there is a rent or weakness in the wall, but they will have a small tender spot, usually anywhere from 2 to 3 cm around the area that is typically affected.

DR. SHERWIN HO:

Now, have you noticed this being more of a problem in your elite athletes, soccer players included, as opposed to the adolescent or high school athletes that you might see?

DR. WILLIAMS:

I have only seen it in my elite, and as you know, when we talk about elite we are really talking about exposure and elite athlete of this kind will usually be playing soccer or training with soccer in mind on a year around basis. Our adolescents, even those who do the travel teams, do not usually have the same exposure. What I think happens is, and this is just my own anecdotal thought on it, I have not seen a sports hernia in an athlete. I am going to pull a number out of my hat here, probably less than age of 25, and one would think that this is a progressive weakening of the abdominal wall that takes place over years of time because, again most of these players who are in our team are of European descent or Mexico or South America where they probably have been very actively playing soccer year around for many, many years probably since they are preadolescent, even 9 or 10 years old. They show up with this weakness and then

basically start to have pain once they reach some clinical threshold wherein the weakness in the wall becomes a pain generator.

DR. SHERWIN HO:

And I think I would agree with that, we do not see that other than in that high-level Olympic caliber or professional athlete.

DR. WILLIAMS:

Correct. You asked me before how do you manage them. We manage them in a myriad of fashions, obviously the simplest is rest and anti-inflammatory medications, may be with a cold laser. I do not know if your trainer doing of that, certainly mine are with both my basketball and soccer teams that start to increase the blood flow locally to the area. Again, it has been validated, but certainly, from the standpoint that is what has thrown the kitchen sink at the athlete, as certainly there is no downside to it. Local injections have not really been proven useful and we can kind of slide away and attain about that a little later if you would like to because, as you start it then slide into surgical management of this problem. There really is a wide variety of thought on that topic, anything from reconstruction of the abdominal wall in that area with mesh, which is a more traditional general surgery type approach to the problem, which would require the athlete be out from anywhere from 4 to 6 months to a relative plication if you will of the supporting fascia or tendon of the rectus abdominis there which some surgeons, there is a surgeon in Germany who has operated on a couple of our players. She only recommends that they are out for 7 to 10 days and then they can return to sport after that, so as an orthopedic surgeon, we do not typically operate in this area, but I think, I can comment on it or assess it from an objective standpoint, I have to say the results from the German approach seemed to have been pretty well born out by the clinical results in our athletes. We have had, I believe, in the last 3 years, 4 athletes have had the surgery, 2 of the athletes are still with the club and they are functioning fine with no ill effects.

DR. SHERWIN HO:

Yeah, in our experience we found that surgery is really the best treatment to get them back on the field as quick as possible and that a lot of the nonsurgical treatments really have not been that reliable.

DR. WILLIAMS:

I agree. Which type of approach when have your players undergone, the more formal reconstruction of the wall or the plication type procedure?

DR. SHERWIN HO:

The arthroscopic plication is what we have been using here in the mid west, here at the university.

If you are just joining us, you are listening to breakthroughs in sports medicine on ReachMD XM 157, the channel for medical professionals. I am your host, Dr. Sherwin Ho, and joining you today to discuss the treatment and prevention of injuries for elite soccer players is Dr. Riley Williams, head team physician for the New York Red Bulls, professional soccer team.

DR. SHERWIN HO:

Dr. Williams, we have been talking a little bit about sports hernias and groin injuries. What are some of the other injuries that you found

have been problematic for you in your treatment? I know here in the mid west we have a lot of stress fractures and other type overuse injuries that become difficult to treat, but in the elite soccer player what are some of the injuries that you are seeing?

DR. WILLIAMS:

When we talked about the sports hernia, which is one, I think probably the most meddlesome injury we see again are the strains about the pelvis, the groin strains, the hamstring strains, and meddlesome are not because they are diagnostic dilemma or that they are hard to treat, it is just that there is very little that we have to offer them as an intervention to get them back to sport or to shorten the duration. It takes for them to become clinically viable to get back on to the field. Their sport is in natural sport where there is a lot of acceleration-declaration, which then requires them to undergo a lot of eccentric muscle contraction around the pelvis, so they are naturally predisposed to this injury so on a constant basis, no matter how well trained they are, no matter how muscular they are, one might argue that being muscular and strong be even the risk factor for this injury, so we have gone to, in particular with regard to hamstring strains, which I want to say we lost somewhere between <_____>

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