

## **Sports Dermatology (Part 2)**

*Dr. Jonathan Williams*

Here's your antibiotic-resistant bacteria. Here's what they're here's what the NCAA says Minnesota high school league does also. We're Looking at the Staph-resistant bacteria. Typically if it's [? methicillin ?] resistant, you're probably to find other and other antibiotics that it's resistant to as well. So this is one of the reasons why they're going to start seeing more and more similar compounds being used. The trouble is high morbidity with this as well, so be careful. If they penetrate down through, you get into the vascular system or into the lymphatic system. You're going to end up with a septicemia.

Any time and you start thinking about this anticipate the use of IV antibiotics. Typically, they use triple antibiotics on two or three different types of antibiotics blended together.

Skin abscesses, your carbuncles that don't heal over very quickly, start thinking antibiotic-resistant. This is where we can also start culturing things. If you have something that's growing, it's slow responding, if you don't see a substantial change within about 48 hours, order a culture. Find out what it is so that you then have a sensitized. That way you can prescribe or have the prescribing doc prescribe the appropriate antibiotic, not a general antibiotic, but a specific one for that particular infection.

If you want a very real safe, as soon as you see an infection get it cultured. Culture it out. Don't worry about it. If their parents realize that these infections are going to stop their sons or daughters from participating in a sport, they're going to pay for the culture. I mean, a culture runs, what \$25? It's not that big of a deal. But if you get that cultured and find out what it is and be much more aggressive with the antibiotic treatment, the team is going to be happier, the athlete is going to be happier, and so are their parents.

Prevention-- keep anybody that's playing with any type of infection away. Any skin that's braised, injured, cover it and protect it. Make sure they know how to clean any type of injured tissue. So if they got a little abrasion, make sure they know what to do. It's not just soap and water, but they to go back over with some anti-microbial substance just to clean things out and protect it. Keep it from getting [INAUDIBLE].

And then overall good general hygiene. High school kids are notorious for not showering, skipping showers after practices, running out after the game without the shower, heading home, and then going out and going to bed and not getting up to take the shower until the next day. And they're sleeping in the same bed clothes, unless mom changes them for them, for weeks on end. So be careful. And again proper hygiene.

The other thing with proper hygiene when you're dealing with infections, impetigo-- daily change bedding. Things that are high infectious change bedding daily. You don't want it on there so it can spread infections again. And, again, if we do come across the MRSA, it is reportable.



And we have to report it to the CDC and the Minnesota Department of Health. So just be aware of that as well.

Now, this is another reason why it might be best to refer them over to the MD or the DO, and let them do the report. They've already got the forms there and everything else. It will be a lot quicker for them to do it and get and get back the antibiotics that are needed and everything else. Then we can take care of the hygiene and the in between stuff.

But here's a nice picture of a little bit of a small MRSA infection. Again, it looks like a carbuncle or an infected [? furuncle, ?] or a folliculitis, so it's similar to your impetigo. Many times with the MRSA's, what it does is it starts rupturing from the top. It starts seeping out a little bit, so you get that secondary response with that crusting. And it's that crust that will allow it to be scratched and spread around the body. So, again, highly contagious.


Acne-- acne is not-- even though acne are a bacterial infection, this one is not contraindicated, and it will not prevent an athlete from playing. The big that you have to worry about is that we've got proper hygiene. They do not share equipment. But according to the NCAA and the Minnesota High School League, acne is not an infection that we have to worry. It's typically not contagious from one person to another. Again, general good hygiene protect themselves.

This is one thing where I would use the silver washes on their equipment. Go ahead and some of the colloidal silver, or your nanosilver, or some of the other silver [? aginates ?] that are liquid form. Wipe everything out. Wipe down the paddings. Let that air dry. Basically, they're all water-based they're going to air dry. So it's just going to help prevent anything and keeping these kids from getting deeper and further breakouts.

One of the things that Dr. Stark and I have talked about in the future is we'd like to get some [? ozone ?] equipment in here, so we can actually start moving around to the high schools to sterilize equipment. That's hopefully still in that game plan somewhere down the road. But acne is one that we want to work with. Also the ozone does tend to destroy bacteria, gets the odor out of stuff, and everything else.

Tinea infections. These are your fungal infections. Whether it's a tinea [INAUDIBLE] over the body, jock itch, athlete's foot, whatever, it's a fungal infection. They have to be under treatment for 72 hours before they can be allowed back into play. Also those areas need to be covered.

Now if [? the ?] NCAA recommends the [? OptiFlex ?] [INAUDIBLE] because it's very easy to use. It's a roll. So you can roll it out, cut whatever you need, and put layers over the top of it. It's not as is as expensive as the Tegaderm. This size Tegaderm runs about \$2 to \$3 per sheet. This roll, 10 meters, is about \$16. So it's a lot less expensive, and it will still cover things over for you a real nicely.



So with your fungal infections, they tend to stay pretty localized, and they do not spread as well, especially after being on medications for that 72 hours. You can cover them and bring them back in.

There's some of your different types of lesions. There's your [INAUDIBLE], your body, there's your athlete's foot, there's your jock itch, and here is your tinea [? versicolor, ?] which basically destroys the melanocytes and gives you those white spots. All of them, topical medications-- if they're severe and not responsive to those medications within 72 hours, they can also go then to an oral antifungal, which will [INAUDIBLE].

For alternative therapies for tinea infections, you all remember good old DMSO. DMSO mixed with tea tree oil does a fantastic job. So it will help clear it off really nicely as well. So you can use it in between your topical stuff that is prescribed. And, again, use the prescription stuff. That way, you're covered. The medics are responsible for it, and you're not to be responsible for anything that gets spread through. There's your different features for athlete's foot, red, erosions, scalings. You can read that later on.

Herpes infections-- symptoms are gone, no new lesions. Remember with all your herpes infections, you're going to have those little vesicles. They're going to be those little fluid-filled vesicles that look like a little, tiny blister. All your different types of herpes infections have those. And that's the sign. And so in other words, no new blisters for three days. Everything is crusted over. Since it's a viral infection and not a bacterial, once everything is crusted over, basically that virus is not active. So it's not going to be spread. As long as you have new vesicles, that's what is going to be able to be communicated.

Recurrent infections, these are ones that will have ulcerations to them. Now, once they're dried out, solid, and sealed, then we can start moving them back in. But these one's you typically take medications for up to five to seven days. So be aware of that.

And here's some of your different types of herpes infections. You've got the ones around the mouth, herpes labialis. We've got the herpes gladiatorum. So basically you're going to be in areas of friction. You've got the regular zoster. Here's your genital, and here's the Whitlow. So Whitlow typically tends to be on the fingertips. Again, it'll have those vesicles. The area will be red. It will be itchy. And it will be irritated. But those are the primary ones that you're going to be dealing with.

Molluscum, this is a pox virus. It's very contagious. It's very common. Medically, it's considered self-limiting. But that self-limiting can be anywhere from six months to two years. And as long as these little dots are there, it's contagious.

Now, if they're localized-- so if we have an area just this size, and that's the only place that it is-- as long as they're on medication and the area is covered by clothing, you can put occlusive dressings over the top of it, and they can participate.

If it's a wrestler or some sport where the skin is shown, they can not, even if you put the occlusive dressings over the top. So this is one, as long as it's underneath clothing with occlusive bandages or dressings, they can play. But if it's open, they cannot. So if it's in area area where it would be rubbed, even with occlusive dressings and anything else, they cannot participate. So if it pops up-- and these things are very contagious. Where you're going to see this most commonly is in the young kids grade school to middle school. That's where you'll see it most frequently.

And if it does pop up in the high schools, catch them early. These are very localized infections. If you scratch them and break the top, yes, then you'll spread it. If you rub up against somebody and the top breaks off a little bit, it's being spread. So for quick treatments, what they'll do is surgically remove these things. A little snip in [INAUDIBLE]. But that's the only way that they'll do it and be able to get back in real fast. So with molluscum, you have to be careful because it does spread very quickly because it ends up having a very thin layer of skin over the top, and they will rupture on you.

Your warts, again, these are viral. They are contagious. With plantar warts or any warts on the body, these are not contraindications to play as long as they can be covered. Inside shoes is not a problem. But if they're on hands they need to have occlusive dressing over the top and then wrapped. And as long as it can't be torn off during whatever sport it is, they can continue to play. The trouble with these is they are viral, and they are transmitted and they can be communicated.

Some of the things that work very well from an alternative point of view, [INAUDIBLE] out here. It's a product called Mayapple from Hawaii Pharm. Mayapple has some very nice qualities and tend to be cytotoxic to the virus. You put that over the top and then use your duct tape over top of that.

These viruses need to be in an aerobic situation. Duct tape puts them in an anaerobic situation which allows them to die off. So the duct tape does work nice, but the Mayapple works even better on top of that. And if you don't have a Mayapple, tea tree with DMSO drives it in or DMSO with salicylic acid. Drive it in there and then put the duct tape over the top of that, so we've got a couple of different alternatives.

Last couple of things, scabies. It's a little mite. It burrows up underneath the skin, lays its eggs, and as the little critters start developing now we can start seeing movement underneath. So they'll burrow underneath the skin and everything else.

Again, these are contagious. Many times with scabies, you may only have two or three of them on your body. But they'll burrow in, lay their eggs, come out, and crawl over and burrow in someplace else. So you might have a number burrows in the area, but you may only have two or three critters.

Now, they'll jump and move from one person to another. So again, you have these hygiene, bedding change daily, and get your topical prescription materials to get these cleared off, and then use a good anti-microbial wash and just keep things going.

By the way, they have to be on prescription treatment for about three days. And then 24 hours after the treatment is done, then they can go back into play. So they may be out anywhere from three to five days before these things are completely considered clear.

Ingrown nails, even though we might be dealing or it can lead to potential infection sites, these are not contraindicated to play. Basically let them play as long as they're capable and can stand the pain. The best thing is to take them into the medics, let them slice that nail and cut that thing out, and then pack it to let it grow back out.

There are some neat treatments, where you have ingrown nails on both sides, where they'll actually taking a device, spread it, and then pack it underneath. So they've got some nice little devices to start lifting the sides up and actually causing it to form that. And they actually bend it back and cause them to crease to take the pressure off of it and then pack it underneath.

But these are not contraindicated. Again, it's for comfort. Sunburn, not contraindicated but comfort. Prevent it from being re-burned again.

OK, I think we had time. You wanted time for questions and answer.

Blisters.

Acute blisters where the skin is still there or maybe it just ruptured, but acute, soft, moist skin is there. I've seen and heard different things, and I've done different things, and really haven't had more success one over another. What's your view on that top layer of skin? Slip the 18-gauge needle in there, drain it, leave the skin.

Leave the skin. Right now, they're saying leave the skin on there. Because if you don't, you're opening up that site to more information. And it's also getting now through the epidermis, so you're down into the dermis. So if you start rubbing down through there, you're going to have more problems.

So they say leave that and then put an ointment over the top. That would be one place where your triple antibiotic would be very nice. Because with the Vaseline base or petroleum base, it acts like a nice lubricant. Take your moleskin and cut a section out over top of that and then another layer of moleskin on top of that. So that blister is completely protected, and it has some cushion above it and some free space.

Culturing wounds-- Culturing? Culturing them. Are there kits that our doctors here, our providers here can in their clinic that's affordable.

Typically, most of the labs will give them to you. So you can get those. They're those stick cultures. Call your lab, and ask for half a dozen of them to have them in there for skin cultures.

I would also, if you're going to be having the skin culture ones, I would get scraping culture kits for fungal infections. Because with the fungal infections, you're going to get that scaly stuff over the top. And a culture stick, because it has the cotton swab, is not going to be rough enough. So you actually need a wooden stick that'll come over and scrape it and slide that in. And then they can put that underneath the microscope to find out what's going on.

What's your view for clothing? So we've got singlets for wrestling and gis for martial arts. Using just a little bit of chlorine when you're washing the clothes, does that seem to be of benefit? That seems to be of benefit, yeah. Because for your chlorine, all you need is a 10% solution, and it's going to be anti-microbial. And so if you're using that little amount, you're not going to be bleaching out color out of the uniforms.

The other thing is, when you do have injuries and you get blood on the uniform, Windex with Ammonia, spray that on it and it'll suck the blood right out.

[? Ozone. ?]

I did have that as a question. Maybe you had covered it real briefly. You had mentioned possibly spray. Ultraviolet light and ozone has been a discussion point that we were talking about earlier. Are there services in the area that you're aware of?

Not that I'm aware of right now. That's something that we should look at because I know there's portable equipment around. And it can be moved around. And that's what I would love to have us get. But, yeah, we'll have to look around for that.

Because that's one of the big things is because once that hockey gear comes off and stays in the bag until the next practice, it just keeps on growing and growing and growing and growing. So silver will help too. It's not going to get the odor out. Ozone is the best thing for getting that odor out.

Is there any type of toxic effects with the silver?

The only toxic effect with the silver that's been noted is long-term use. You can get a bluing to the skin. Now, where you would might see that when you're doing it topically is when you're dealing with some of these vascular ulcers, so a venous ulcer, arterial ulcer, or a diabetic ulcer that are slow healing, and slow growing. If you use that because it's continuing to seep, every once in a while you're going to get a bluish around the wound itself.

I know everybody talks about the blue man that was drinking colloidal silver for years. Well, like I say, it was years, and he was making his own silver. Most of the colloidal silver that's available commercially for use runs either 180 or 160 parts per million. He was getting up to close to 500 parts per million, and he was doing it for a long period of time. And so that builds up into the skin. But otherwise, I haven't seen it.

[INAUDIBLE] would you also caution for excess use of the tea tree oil stuff for a topical remedy, as it's a phytoestrogen and also it can be reactive to sunlight.

Yep, absolutely. Anything that we're using for treating bacterial infection, viral infections, or anything like this, I'll be using it in the same way it is as a prescription. I want to use it for a limited time only, and not as prophylactic.

That's the other thing that you're going to find with silver. A number of companies are recommending it used as a prophylactic. I don't for the simple reason that silver is anti-microbial, anti-bacterial. And when it does attach it goes through the cell wall. It will disrupt cellular function. It can also disrupt ours, and it's also going to disrupt all our GI flora as well. Bacteria is bacteria. So if you're taking an antibiotic, you're not only disrupting the effective bacteria, but you're also disrupting your internal flora as well.