

As appeared on InterMat - March 6, 1999

Skin Disease in Wrestling

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In recent years, skin disease in wrestling has finally received the attention it deserves. With the NCAA mandating skin inspections prior to each competition, the wrestling community was forced to address the issue. For many years it was a taboo subject, similar to "cutting weight". Many ignored the problem or attempted to cover it up with make-up. Others treated the skin lesion with a variety of home remedies in an attempt to kill it. There was a fear that it would keep the wrestler from competition. Holding one wrestler from competition is better than infecting many.

A big factor in these problems was the lack of education among the wrestling and medical community. Physicians, coaches, athletic trainers and wrestlers needed to recognize the signs, symptoms and appearance of various skin diseases. Another problem was identifying the proper treatment for each skin disease. Many of the traditional medications used on the general population were not working effectively with wrestlers. It seemed to be a more resistant strain and more difficult to attack.

Recent research and education has greatly improved the diagnosis and treatment of skin disease in wrestling. One person leading the charge has been Dr. David Vasily, Team Dermatologist at Lehigh University in Bethlehem, PA. Along with Jack Foley, Director of Sports Medicine at Lehigh, they have increased awareness of the importance of controlling skin disease in wrestling. They wrote NCAA guidelines and were a big factor in the NCAA mandating skin inspections. They have also developed treatment protocols and continue to try new medications for various skin problems.

The two major skin diseases in wrestling are herpes gladiatorum and tinea gladiatorum.

Herpes

The long standing skin disease associated with wrestling is Herpes. Herpes Simplex I or herpes gladiatorum generally occurs on the face. It is a viral infection of the skin that begins as a cluster of honey colored bumps on a red base. In wrestlers, diagnosis can be difficult and can simulate folliculitis or impetigo. Accompanying lymphadenopathy is common. The initial or primary phase of a herpes virus outbreak may cause fever and general sickness symptoms. These symptoms will occur within 2-7 days of exposure. The recurrent phase of herpes are usually less severe and generally occur in small vesicles in one location. Often this is preceded by an itching or burning feeling of the area.

The term herpes is Greek and means to creep. Because herpes is a virus it often returns again and again. The virus hides in the nerves and is never completely removed from the body. It usually

returns to the same site. Herpes is transmitted by contact, therefore strict guidelines must be met before returning to wrestling. Every attempt to clean and disinfect the exposed areas should be taken. However, the vast majority of cases are transmitted person to person. Fever, sun exposure and stress may act as trigger factors to cause a reoccurrence. A Tzanck prep or HSV antigen assay test may be performed by a dermatologist to determine if the area is contagious. This is helpful in wrestling situations to determine if a wrestler will be cleared to compete.

Treatment of herpes includes the oral medication Valtrex (valacyclovir). For primary cases, Dr. Vasily recommends 1000mg tablets 2 times a day for 7 days. The recurrent cases should take 500mg Valtrex 2 times a day for 5 days. The lesions begin to dry up after a few days and form a yellow crust. To accelerate crusting, you can also use a drying agent such as the astringent witch hazel solution 3-5 times per day. For the non-infected wrestler who may have been exposed and wants to prevent infection, Dr. Vasily recommends 500mg of Valtrex twice daily for 3 days. Some wrestlers may want to prevent an outbreak or recurrence during the season. Dr. Vasily advocates 500mg taken daily with a starting date of 3 days previous to the opening match and concluding 1 day after the final match. This dose should be taken at night with good hydration. Some collegiate teams place their starters on preventative doses prior to their conference and NCAA tournaments. Wrestlers who are herpes carriers should consider taking a preventative dose of 500mg per day, with an increase to 1000mg/day if they break through.

Valtrex inhibits viral replication and is the next generation of Zovirax (acyclovir). Valtrex has an added amino acid which enhances absorption resulting in predictable and high blood levels of the parent drug acyclovir. Valtrex is the most tested drug in the treatment of herpes. The study spanned ten years and proved to be the safest, most predictable and effective.

In order to compete following an outbreak of herpes, the following NCAA guidelines must be met:

Primary Infection

1. Wrestler must be free of systemic symptoms of viral infection. (fever, malaise, etc)
2. Wrestler must have developed no new blisters for 72 hours before examination.
3. Wrestler must have no moist lesions; all lesions must be dried and surmounted by a **FIRM ADHERENT** crust.
4. Wrestler must be on appropriate dosage of systemic antiviral therapy for at least 5 days before and at the time of the meet or tournament.

Recurrent Infection

1. Blisters must be completely dry and covered by a firm adherent crust at the time of competition, or wrestler may not participate.
2. Wrestler must be on appropriate dosage of systemic antiviral therapy for at least 72 hours before and at the time of the meet or tournament.

Questionable Cases

1. Tzanck prep and/or HSV antigen assay (if available)
2. Wrestler's status deferred until Tzanck prep and/or HSV assay results complete.

Ringworm (Tinea Corporis)

Tinea is the term used for fungal infection of the skin. Commonly referred to by the location of the infection, tinea unguum (nails), tinea pedis (athlete's foot), tinea cruris (jock itch), tinea corporis (body) and tinea capitis (scalp and hair). In wrestlers, Tinea corporis is known as tinea gladiatorum commonly known as "ring worm". The fungus causes a characteristic lesion which is often clear in the center with a rough, scaly, circular border. The lesions vary in size from very small circular patches to large patches. The dermatologist often uses a scraping to examine the fungus under the microscope. A KOH prep test can be used by a dermatologist to determine the activity of the tinea. Tinea corporis is contagious and is spread through direct contact with infected individuals and, very likely, from infectious spores on inanimate objects such as clothing, mats, etc. The organism responsible for tinea gladiatorum, trichophyton tonsurans, is quite contagious and very difficult to treat.

Treatment for "ring worm" includes application of an anti-fungal cream to the affected area. The most effective anti-fungal cream has been Lamisil (terbinafine hydrochloride). Lamisil cream 1% should be applied to cover the affected and immediately surrounding areas at least twice per day. Lamisil should be applied for at least two weeks. Although only a few applications of the cream may render the fungus non-contagious, it may take 4-6 weeks for the pink spot to resolve. It is very important to continue the use of anti-fungal cream for one week after the lesions have cleared because the fungus may be living under the skin, invisible to the naked eye. Most treatment failures occur because the patient stops the medication too early. According to Dr. Vasily, over-the-counter anti-fungal creams such as tolnaftate (Tinactin) or clotrimazole (Lotrimin) only suppress the fungus.

An oral medication may be indicated by a dermatologist when multiple tinea lesions or scalp involvement are present. Dr. Vasily recommends Lamisil 250mg 1 tablet per day for 4 weeks. Lamisil cream has been shown to be less effective on lesions of the scalp, thus oral Lamisil is needed. Shampooing with selenium (selenium blue) may prevent contagious spores from infecting others and is also used preventively after contact.

Prevention of tinea should be a major priority in wrestling. Prevention begins with cleaning all mats pre and post practice with a hospital grade disinfectant. Second, wrestlers should be educated on what to look for and inspect their own bodies daily. Third, wrestlers must wash all workout gear daily and be sure to wash knee pads and head gear twice a week. Fourth, wrestlers should shower immediately after workouts and use an antibacterial soap and selenium shampoo. It is also important to keep the skin from drying out creating portals of entry for infection. Finally, when a lesion is noticed, they must consult their physician or athletic trainer and use the proper medication. The lesion should be covered prior to wrestling according to NCAA guidelines outlined below.

If a wrestler is identified as having a tinea lesion, the NCAA uses the following guidelines to determine the wrestler's competition status:

1. A minimum of 72 hours of topical therapy is required for skin lesions. The topical antifungals terbinafine or naftifine (lamisil or naftin) are suggested for treatment. A

minimum of two weeks of systemic antifungal therapy (oral medication) is required for scalp lesions.

2. Wrestlers with extensive and active lesions will be disqualified. Activity of treated lesions can be judged by examination of KOH prep and the therapeutic regimen. Wrestlers with solitary, or closely clustered, localized lesions will be disqualified if lesions are in a body location that cannot be covered securely. Covering routine should include selenium sulfide or ketoconazole shampoo (nizeral) washing of the lesion followed by application of naftifine gel or cream (naftin) or terbinafine cream (lamisil). A gas-permeable dressing such as Op-site, bioclusive or duoderm should be applied over the lesion, followed by prowrap and stretch tape. Dressing changes should be done after each workout so that lesion can air dry.
3. The dispensation of tinea cases will be decided on an individual basis, as determined by the examining physician and/or certified athletic trainer.

According to Jack Foley, the best prevention is to have a plan or formula for being both pro-active and preventative. Dr. Vasily and Foley have implemented the HITE plan. The word simply refers to H for a hygiene and herpes talk, including a skin survey filled out by all wrestlers, followed by a thorough skin examination. I stands for immediate isolation at the onset of symptoms with potentially contagious skin problems. T stands for the treatment and proper medication and dosage given over an appropriate course of time. E stands for education and our continuing effort to educate wrestlers, coaches , parents and members of the medical community about skin infections and their prevention, recognition and treatment.

Hygiene
Isolation
Treatment
EDUCATION

It is always difficult to disqualify a wrestler who has worked hard to compete, but everyone deals with it better now that we have a base of knowledge in the wrestling community," stated Dr. Vasily. "There has been an increased awareness and communication among athletic trainers and medical staffs that have allowed a steady decline in skin disease in wrestling", stated Foley. The numbers of skin disease at the National Prep Tournament have significantly decreased over the last five years." Foley also said "There has been a steady decline overall, but most importantly with herpes gladiatorum." "Ringworm still exists, but we now have the education to recognize it and treat it properly."

After a recent outbreak of herpes in the Lehigh Valley of Pennsylvania, Dr. Vasily and Jack Foley were inundated with calls for help. "Today, I feel many if not all programs are willing to be pro-active while being preventative, moving from an antagonistic position to a more cooperative awareness through education", stated Foley. Dr. Vasily stated that "the positive situation today is due to the hard work of athletic trainers and the cooperation of the coaches, both parties have been critical in the overall success." A final goal is for collegiate sports medicine staffs to sponsor an educational seminar for local school districts annually. Foley expressed that "this would result in a continued effort in preventing and managing skin infections in this great sport of wrestling at all levels."

****Note:** Always consult your local dermatologist regarding any skin lesions.

References

Jack Foley, Director of Sports Medicine, Lehigh University, Bethlehem, PA (jjf4@lehigh.edu)

Dr. David Vasily, Team Dermatologist, Lehigh University, Bethlehem, PA

1999 NCAA Wrestling Rules and Interpretations

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