



Grant Information Summary:

Are There Carriers of Ringworm Among Competitive Wrestlers?

Practical Significance:

This study proves the existence of a fungus in competitive wrestlers without symptoms which has the potential to cause a ringworm infection in a susceptible opponent or teammate.

Background

Ringworm infections are very common in competitive wrestling. They can cause disruption of both individual and team goals because those found to have an active infection cannot compete. One goal in the effort to control these infections would be to find the source of the infections. We hypothesize that there are wrestlers who harbor the fungus responsible for the outbreaks of infection without having clinical symptoms. These carriers could be a major source of infection and

an obstacle in treating infections because they provide a constant source of fungus for new infections.

Objective

We have sought to prove the existence of asymptomatic carriers of the fungal organism responsible for the outbreaks.

Design

Prospective cohort study involving screening examinations and scalp testing for fungal organisms

of those found not to have clinical disease during preseason (PS), mid-season (MS), and post-season (PT) in high school (7 schools) and collegiate wrestlers (one Division 2 school). Male basketball players from each of the participating schools provided a control group to determine if wrestling had more carriers.

Subjects

Wrestlers from 7 high school interscholastic wrestling teams and male basketball players from the same 7 schools served as controls. Wrestlers from one NCAA Division 2 collegiate team and male basketball players from the same school served as controls

Measurements

Scalp brushing samples incubated on Mycosel fungal media during PS, MS, and PT for each study participant

Results

There were no carriers found during PS screening of wrestlers and basketball players. During MS screening there were significantly more wrestlers (22 of 107; 20.6%) than male basketball players (1 of 54; 1.8%) that were carriers ($p < .001$). During PT screening the difference in carrier prevalence approached significance, wrestlers (11 of 107; 10.3%), basketball (1 of 54; 1.8%) ($p = 0.06$). All fungal organisms found were identified as *Trichophyton tonsurans*.

Conclusions

There is a modest presence of asymptomatic carriers of ringworm among competitive wrestlers which may act as a reservoir of recurrent and persistent active infection in this population. Further study must determine if treatment of the carrier state will influence the incidence of infection and if the presence of fungal organisms is a ubiquitous characteristic of the sport.

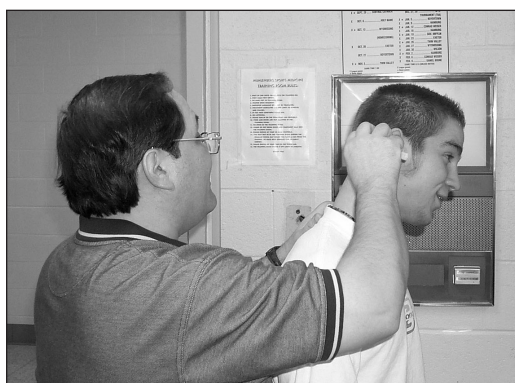


Photo 1 Sampling of a wrestler's scalp.



Photo 2 Plating of a sample.

Primary Investigator:



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Dr. Kohl is earned his undergraduate degree at Albright College in Reading, PA. He graduated from Pennsylvania State University College of Medicine at Milton S. Hershey Medical Center in 1996. He completed a family medicine residency at Reading Hospital and Medical Center in 1999. Dr. Kohl is currently adjunct faculty for sports medicine at Reading Hospital and Medical Center Family Medicine Residency where he teaches sports medicine to residents and medical students. He serves as the team physician for Wyoming Area High School

Publication & Presentation List

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