Community-Acquired MRSA Strikes Baseball

Turf burns, abrasions, shared equipment, and frequent antibiotic use put professional athletes at risk.

BY JANE SALODOF MACNEIL
Southwest Bureau

KAPALUA, HAWAII — Bars of soap and the sharing of personal items such as razors and towels have been banned from the New York Yankees clubhouse as a prophylaxis against the spread of methicillin-resistant *Staphylococcus aureus* infections.

"Baseball got put on notice in 2005 when two of its biggest stars got community-acquired staph infections," said Steve Donohue, the team's assistant trainer, as he described these and other defensive measures to physicians at the Winter Clinical Dermatology Conference, Hawaii.

In the Orioles clubhouse, MRSA was found on the carpet in front of Mr. Sosa's locker and on mats in the weight room.

MR. DONOHUE

Reporting growing concern about the risks faced by professional athletes, he cited the illnesses of major league players Barry Bonds and Sammy Sosa, both of whom were waylaid last year, and the death of St. Louis Rams football announcer Jack Snow in January.

An abscess and staph infection on the bottom of Mr. Sosa's left foot put him on the Baltimore Orioles' disabled list twice during the 2005 season. Mr. Bonds played only 14 games for the San Francisco Giants, while he battled a bacterial infection after knee surgery.

Mr. Donohue said the Orioles management had infectious disease experts screen the Orioles clubhouse. He reported they found methicillin-resistant *Staphylococcus aureus* (MRSA) in two places: a carpet in front of Mr. Sosa's locker and ripped mats in the weight room.

Mr. Snow, 62, a former star player for the Rams, died after being hospitalized for several months with a staphylococcus infection. Describing the death as tragic, Mr. Donohue said he did not know whether it was caused by MRSA.

He noted, however, that a study reported 5 of 58 Rams players (9%) had MRSA infections during the 2003 season (N. Engl. J. Med. 2005;352:468-75). Three infections were recurrent, bringing the team's total number of MRSA infections to eight.

While the authors of the Rams study did not find MRSA in nasal or environmental samples, they did find methicillin-susceptible *S. aureus* bacteria in whirlpools and taping gel and in 35 of 84 nasal swabs (42%) taken from players and staff members.

"This study is particularly scary," Mr. Donohue said at the meeting, which was sponsored by the Center for Bio-Medical Communication Inc.

Professional athletes in team sports have many risk factors for MRSA infections, according to Mr. Donohue. He listed turf burns and abrasions, shared equipment, body shaving (which he said has "increased sharply with the body-building and weight-lifting culture that has taken over baseball a little bit"), and frequent antibiotic use.

"In sports, players tend to be treated more aggressively, because they can't miss any time," Mr. Donohue said.

In the football study, the investigators calculated that the Rams players received an average of 2.6 antimicrobial drug prescriptions per year, according to entries in a team pharmacy log during 2002. This was described as more than 10 times the rate for men of the same age in the general population, which receives 0.5 prescriptions per year. During the 2003 season, about 60% of Rams players surveyed reported they had taken or received antimicrobial drugs.

Mr. Donohue said the Yankee trainers have taken aggressive countermeasures to control and prevent MRSA infection from spreading in locker rooms at home or on the road. These include limiting the activity of anyone with an infection, providing alcohol-based hand rubs and antimicrobial soaps, banning the sharing of personal items such as towels and razors (which must be disposable), and being vigilant about surface and spa infection.

Players are educated about proper hand washing, he said, and trainers are alert to the risk from skin infections. Especially worrisome are situations when "a player complains of bug bites without seeing any bugs."

The team may need to do more, Mr. Donohue speculated, as he threw out two questions for his physician audience to ponder: "One, should nasal swab surveys be part of our spring training routine physical? Two, if we have a player who is infected with MRSA, would you prophylactically use [mupirocin] Bactroban nasally on the rest of the team to try and prevent colonization?"

Yankee manager Joe Torre added in an interview at the meeting, "With all the players so close to each other physically, you are always concerned about something. Our ball club—it's only because of Steve and Gene [head athletic trainer Eugene Monaghan]—if there is ever a danger whether it be a rash or conjunctivitis, they make sure they separate that player from the rest of the team, because they understand how dangerous [the threat of infection] could be."

Dr. Darrell S. Rigel, clinical professor at New York University, New York, also observed that MRSA is becoming a serious concern for the Yankee team, to which he is a dermatologic consultant. "At any level of sports you have to think about it," said Dr. Rigel, a program director of the conference. ■

Risky Behaviors Linked to HIV Seroconversion in Men

BY ROBERT FINN
San Francisco Bureau

SAN FRANCISCO — Using nitrite inhalants, being uncircumcised, and engaging in certain sexual practices all increase the risk of HIV seroconversion among HIV-negative men who have sex with men, Dr. Susan P. Buchbinder reported at a meeting on HIV management sponsored by the University of California, San Francisco.

The results of her published study, along with related unpublished data, suggest a number of behavioral strategies to reduce the risk of HIV transmission among men who have sex with men (MSM).

"Some people say, 'We know what causes HIV [transmission], so why don't men change behavior?' " said Dr. Buchbinder, director of the university's HIV research section. "This is a response that one of my colleagues gave many years ago: She said, 'If behavior change were easy, I'd be thin.' I think we all recognize that behavior change is difficult. It's difficult to sustain over time."

Dr. Buchbinder's study involved 3,257 MSM from six U.S. cities who were HIV negative when they enrolled in the study in 1995. Participants were seen every 6 months for an 18-month period. During that time, 72 men became infected with HIV, yielding an annualized HIV seroincidence of 1.55 per 100 person-years (J. Acquir. Immune Defic. Syndr. 2005;39:82-9).

Taking into account the odds ratios of various risk factors (adjusted for sexual behaviors), as well as the prevalence of those risk factors in the population studied, Dr. Buchbinder and her colleagues calculated the population-attributable risks (PARs) of various behaviors and characteristics. (See table.)

The highest PARs were seen in men who had greater numbers of HIV-negative sex partners. The risk of seroconversion increased by 14% with each additional HIV-negative partner reported in the prior 6 months. If one has a lot of HIV-negative partners, the chances increase that one of those partners may have recently become infected and is unaware of this, she explained.

These findings suggest that "we need to further develop new HIV-testing strategies, [such as] the implementation of rapid testing to allow people to know their serostatus more quickly," she said.

The use of nitrite inhalants (known as poppers) also carried a high PAR in Dr. Buchbinder's published study. She mentioned other unpublished data that implicated other drugs, including crystal methamphetamine and sildenafil (Viagra).

"In this study, we found that these three drugs were associated not just with having an increase in anal sex, and not even just having an increase in unprotected anal sex. [These men are] having an increase in unprotected anal sex with a partner whose serostatus was different."

Furthermore, there are probably ways in which these drugs may enhance transmission biologically. For example, limited animal, in vitro, and human studies suggest that crystal methamphetamine is associated with increased HIV replication and perturbations in immune function.

Poppers are also associated with an effect on immune function as well as vasodilation in mucosal surfaces. And crystal methamphetamine, poppers, and Viagra may additionally be associated with more prolonged sexual activities.

It's difficult to know what to do about substance use in this population, Dr. Buchbinder said. Most studies on substance use address people who are addicted, and that model may not apply in a population that uses these drugs intermittently to enhance sexual pleasure.

Seroconversion was significantly higher in uncircumcised men, a finding that Dr. Buchbinder and her colleagues described as biologically plausible, with several possible mechanisms.

One surprising finding was the significant risk associated with receptive oral sex, even after controlling for anal sex practices. Other studies have failed to find an independent contribution of receptive oral sex to HIV transmission. The investigators could not rule out the possibility that this apparent association may simply be a marker for riskier sex practices in general, or that it may reflect unmeasured confounders. ■

Predictors of HIV Seroconversion Among MSM

Variable (in prior 6 months)	PAR	Adjusted Odds Ratio
Number of HIV-negative male partners	28%	1.1
Use of nitrite inhalants (poppers)	28%	2.2
Unprotected receptive anal sex with partner of unknown serostatus	15%	2.7
Unprotected receptive anal sex with HIV-positive partner	12%	3.4
Protected receptive anal sex with HIV-positive partner	11%	2.1
Uncircumcised status	10%	2.0
Unprotected receptive oral sex with ejaculation with HIV-positive partner	7%	3.8

Notes: Based on a study of 3,257 MSM. All predictors listed are statistically significant.
Source: Dr. Buchbinder