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A high-morbidity outbreak of methicillin-resistant Staphylococcus aureus among players on a college football team, facilitated by cosmetic body shaving and turf burns.

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BACKGROUND: Athletics-associated methicillin-resistant Staphylococcus aureus (MRSA) infections have become a high-profile national problem with substantial morbidity. METHODS: To investigate an MRSA outbreak involving a college football team, we conducted a retrospective cohort study of all 100 players. A case was defined as MRSA cellulitis or skin abscess diagnosed during the period of 6 August (the start of football camp) through 1 October 2003. RESULTS: We identified 10 case patients (2 of whom were hospitalized). The 6 available wound isolates had indistinguishable pulsed-field gel electrophoresis patterns (MRSA strain USA300) and carried the Panton-Valentine leukocidin toxin gene, as determined by polymerase chain reaction. On univariate analysis, infection was associated (P<.05) with player position (relative risk [RR], 17.5 and 11.7 for cornerbacks and wide receivers, respectively), abrasions from artificial grass (i.e., "turf burns"; RR, 7.2), and body shaving (RR, 6.1). Cornerbacks and wide receivers were a subpopulation with frequent direct person-to-person contact with each other during scrimmage play and drills. Three of 4 players with infection at a covered site (hip or thigh) had shaved the affected area, and these infections were also associated with sharing the whirlpool > or =2 times per week (RR, 12.2; 95% confidence interval, 1.4-109.2). Whirlpool water was disinfected with dilute povidone-iodine only and remained unchanged between uses. CONCLUSIONS: MRSA was likely spread predominantly during practice play, with skin breaks facilitating infection. Measures to minimize skin breaks among athletes should be considered, including prevention of turf burns and education regarding the risks of cosmetic body shaving. MRSA-contaminated pool water may have contributed to infections at covered sites, but small numbers limit the strength of this conclusion. Nevertheless, appropriate whirlpool disinfection methods should be promoted among athletic trainers.

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