Herpes Gladiatorum With Ocular Involvement in a Mixed Martial Arts Fighter

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We report a case of herpes gladiatorum (HG) in a professional mixed martial arts (MMA) fighter. The eruption appeared following a sparring session with a new partner and progressed to involve the left eye. Fever and facial rash prompted the patient to go to the hospital where he was treated with antiviral therapy. The considerable increase in popularity of MMA may lead to a greater prevalence of HG as well as other cutaneous infections contracted through skin-to-skin contact.

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Participation in sports, especially those involving intense skin-to-skin contact, may result in a myriad of infections caused by bacteria, fungi, and viruses.[1-3] Herpes simplex virus (HSV) is one of the most feared cutaneous infections, and the condition is called herpes gladiatorum (HG) when HSV is acquired through wrestling.[4] The potential for serious consequences, especially with ocular involvement,[5] makes early HSV diagnosis and treatment essential. Because of its high prevalence of infection and transmissibility, HSV infection can quickly lead to epidemics among those participating in contact sports, most commonly wrestling and rugby.[6-12] The emergence and growing popularity of mixed martial arts (MMA), a relatively new contact sport with intense skin-to-skin contact, may lead to an increased incidence of cutaneous infections. We report a case of HG in an MMA fighter.

Case Report

A 25-year-old man with no remarkable medical history presented with a painful rash on his face of 5 days' duration, left eye conjunctivitis, and low-grade fever. The patient was a professional MMA fighter undergoing rigorous training for an upcoming bout. Following a sparring session with a new partner, the patient developed a painful lesion on his left cheek. The rash spread and consisted of multiple painful erythematous vesicles and papules on the left side of the face. The left eye had become inflamed. Initial outpatient treatment consisted of oral doxycycline and mupirocin ointment 2%, which had no effect. On day 5, the patient was admitted to the hospital with a diagnosis of bullous impetigo and was started on intravenous vancomycin.

Physical examination revealed multiple grouped crusted erosions on an erythematous base distributed throughout the left cheek, left lateral forehead, left mandibular region, left ear, and postauricular region (Figure). Also noted were 3 similar lesions on the right antecubital fossa and 2 lesions on the right thigh. A few intact vesicles were noted on the forehead and postauricular region. Conjunctival erythema of the left eye also was prominent. The patient had a history of chickenpox as a child and denied any history of oral or genital herpes. The patient was empirically started on intravenous acyclovir and trifluridine eyedrops for ocular herpes involvement. Direct fluorescence antibody testing and viral cultures were positive for HSV-1 infection and negative for varicella-zoster virus and HSV-2 infection. Serum antibody testing revealed positive titers for HSV-1 IgM and negative titers for HSV-1 IgG as well as HSV-2 IgG and IgM. Human immunodeficiency virus polymerase chain reaction analysis was negative and bacterial cultures were negative.

The patient dramatically improved over the course of the following 3 days and was discharged on oral acyclovir and trifluridine eyedrops with follow-up.

Comment

Herpes gladiatorum results from HSV-1 infection acquired through contact with infected saliva released

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Herpes simplex virus type 1 infection of the face with conjunctival involvement.

during wrestling or direct skin-to-skin contact with a weeping lesion. Our patient had primary HSV-1 infection as shown by the positive HSV-1 IgM and negative HSV-1 IgG titers. Although it is difficult to prove the exact time of initial infection, the sparring session with a new partner most likely resulted in transmission. The patient had multiple regions of involvement including the left side of the face, right arm, and right leg, which is common in HG and not surprising in our case given the extent of skin-to-skin contact in MMA.[6] The patient also developed left ocular involvement presenting as conjunctivitis, which also has been previously reported with HG in wrestlers and rugby players.[5,12,13]

Mixed martial arts is a full-contact combat sport that allows participants to use interdisciplinary fighting styles including boxing, kickboxing, wrestling, and martial arts. It has emerged as one of the fastest growing sports in the United States and its pay-per-view revenue topped $200 million in 2006, surpassing both boxing and wrestling.[14] Given the violent nature of the sport, many critics are concerned about the health impact and risk for injury to those involved.[15-17] Despite controversy, MMA is gaining popularity as a competitive sport among children and adolescents,[18] and it is likely that the number of participants will continue to grow. Physicians are aware of the cutaneous infections associated with wrestling and rugby but may not have realized the emergence of MMA and the extent of skin-to-skin contact in this sport. Therefore, it is important to be aware of the possible increase in cutaneous infections that may result from the growing popularity of MMA, including bullous impetigo, methicillin-resistant *Staphylococcus aureus*, and HSV, among others.

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