

Most Common Herpes Infections among Wrestlers

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Abstract: *The aim of this research is to investigate the spread of the most common herpes infections among wrestling athletes. The research sample consisted of 210 males, aged 21 to 26. 3 of the wrestlers have been diagnosed with herpes zoster, and 21 – with verruca plantaris. Herpes Gladiatorum has been confirmed among 30 of the wrestlers, and 1 patient accounted for molluscum contagiosum.*

Keywords: wrestlers, herpes, verruca plantaris, molluscum contagiosum

1. Introduction

The goal of the research is to investigate the spread of the most common herpes infections (herpes zoster, herpes gladiatorum, verruca plantaris, molluscum contagiosum) among wrestlers.

Verruca plantaris are caused by the human papilloma virus (HPV). Verruca plantaris is transmitted from person to person by direct contact or by contact with contaminated surfaces (wrestling arena). HPV can usually be found in warm and humid environments, such as dressing rooms, public showers or swimming pool surroundings. Walking and swimming barefoot in public bathrooms is a risk factor for HPV contamination. [15,18,19] Verruca plantaris could be extremely painful when walking, especially if located on a foot area under constant pressure. Verruca plantaris is most commonly observed among children and young adults below 30. There are two types of verruca plantaris: singular and mosaic. Solitary (singular) verruca plantaris can often increase in size and consequently multiply, forming additional “satellite” warts. Verruca plantaris from the mosaic type represents clusters of small warts, growing in close proximity to one another. The mosaic type warts are less subject to treatment, compared to the solitary verruca plantaris. [2,10,14,25] Herpes zoster is a viral dermatologic disease, caused by the Varicella Zoster virus. The first contact with the virus causes varicella (chickenpox). Varicella most commonly affects children under 10 years of age. Varicella occurs lightly, causing skin rashes, with an incubation period of 11 to 21 days. It is an airborne disease, although the virus transmission also occurs through a direct contact with the vesicles. [22,23,24]

Another way of transmitting the infection is in utero during pregnancy, as well as through individuals carrying the Herpes zoster, when infectious material comes in contact with the respiratory system and the conjunctiva of the eyes. [23] 80% of the people who have not had suffered from varicella contract the disease through an infected individual. Chickenpox is most commonly affecting children. When the mother contracts the virus in the last 20 days of pregnancy, the new-born will likely have a varicellous rash. The sick are contagious for a period of 1-2 days before the blisters appear up until the crusting of the lesions. Incubation (hidden) period of the disease varies between 12 to 21 days, with an average of 14-16 days. [23,24] The Varicella Zoster virus remains in a latent state in the sensory neurons' ganglia. Herpes zoster (also known as shingles) occurs when the

latent state (post-disease) virus is activated. The activation happens through contact with individuals suffering from varicella or Herpes zoster. Changes on the derma and the mucous commence with processes of inflammation and the appearance of vesicles. [10,12,13]

The prodromal phase of Herpes zoster is between 5 and 7 days and is characterised by a strong neuralgic pain in a specific dermal area, with no apparent skin mutations. Neuralgic pain is sudden and sharp. Patients can experience headache, photophobia, high fever and paresthesia in the affected area. [10,12,24]. Diagnosis is given based on a characteristic clinical evidence – a painful vesicular rash of erythema-edematous basis over a given area of the skin.

Herpes gladiatorum is a viral infection caused by the virus herpes simplex, causing characteristic lesions on the skin and the mucous. It has a spread transmission from person to person. [1,3,4]

The herpes simplex virus is part of the alpha-herpes virus family Herpesviridae. [5,6,7] Upon entering the cells, viruses lose their viral envelope. Only the virus' DNA is transferred to the nucleus, which causes the virus' nucleocapsids to degrade. After leaving the contaminated nucleus, the virus' particles receive viral envelopes from the transformed nuclear and cytoplasmic membrane. [8,9,17]

An individual encounters the virus for the first time between his first and fifth year. The herpes virus stays in the nervous system permanently in a latent state. [13,20,21] The contamination occurs from person to person (with the exude of bubbles, saliva, tears, etc.) directly through a kiss, sexual contact or indirectly through the air or through contaminated objects. The clinical picture of Herpes Gladiatorum: the disease is preceded by pain and/or burning in the affected areas. With Herpes Gladiatorum, clustered vesicles of erythema-edematous basis and a clear consistency are diagnosed on the skin. [21,21] Molluscum contagiosum (MC) is a viral infection of the derma and the mucous. It is caused by a DNA poxvirus called Molluscum contagiosum virus (MCV). [2,11,13] Molluscum contagiosum affects only humans. The virus has four subtypes: MCV, MCV1, MCV2, MCV3 и MCV4. MCV1 is the most common, and MCV2 usually affects elder individuals. The virus is transmitted by person to person through touching the infected derma during a sports competition or a training session. The virus can spread via contaminated surfaces: towels, clothes or sports equipment. After contracting the virus, the mollusca can

spread all around the body. Molluscum contagiosum can also be transmitted by person to person through sexual contact. Molluscum contagiosum can affect every part of the skin, but is most often diagnosed on the stomach, arms, genitalia and legs. The incubation period ranges from two weeks to two months. Molluscum contagiosum are umbilicated tumors with sizes of 1-10 mm. They are pearl white or skin-colored and have a circular, oval or semisphere shape. The lesions can be isolated singular, spread out or merging into a stratum. [13,16,23]

2. Materials and Methods

The research sample includes 210 males, aged 21 to 26. All participants have been wrestling for a minimum of 5 years. Verruca plantaris is a dermatologic virus, characterised by a single or multiple epithelial tumors with a papillomatous surface (warts). [2,10,14]

3. Results and Discussion

The research has been carried out on 210 males aged 21-26. Herpes zoster has been diagnosed to 3 (1.43%) of the wrestlers, and verruca plantaris - to 21 (10%). 30 (14.28%) of the research participants were diagnosed with Herpes Gladiatorum, while molluscum contagiosum was found among 1 (0.48%) of the wrestlers.

Based on existing literature, the frequency of Herpes zoster found among wrestlers is around 4,8%. The research sample demonstrated 1.43% presence of Herpes zoster among the athletes. In a global scale Herpes Gladiatorum is found among 29,8% of wrestlers, while the present study discovered the virus in 14.28% of the participants. Literature determines that Molluscum contagiosum is averagely diagnosed among 8%, while the study research sample demonstrated a Molluscum contagiosum frequency of 0.48%. Globally, Verruca plantaris reaches 20% of wrestlers. The study determined that 10% of the observants had verruca plantaris.

4. Conclusion

Herpes infections, including latent ones, are usually found all around the world. They are transmitted from person to person through the exude of bubbles, saliva, tears and feces of contaminated individuals or virus carriers. It is possible that the virus spreads when using shared towels, cutlery and water containers. Sportspeople are exposed on the danger of a herpes infection transmission through contact during sport competitions or when using common sports equipment.

Wrestling is a sport with a high degree of contact, therefore it facilitates contamination with dermatoviroses during competitions and training sessions. The athletes are most contagious during the vesicular rash stage. A risk of virus transmission exists during wrestling, when healthy skin is in contact with contaminated skin areas. Prevention of herpes diseases includes dermatological medical examination of all athletes before every contest. It is mandatory that wrestlers carrying herpes viruses are detached from the team until full recovery. It is forbidden for contaminated wrestlers to

compete until the danger of transmitting herpes viruses has been eliminated.

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