



Orthopoxvirus Targets for the Development of New Antiviral Agents

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DESCRIPTION

Orthopoxviruses are a family of viruses that can cause severe illness in humans and animals. The most well-known member of this family is the variola virus, which causes smallpox. While smallpox has been eradicated, other Orthopoxviruses, such as monkeypox and cowpox, still pose a threat. Recognizing the symptoms of Orthopoxvirus infections is crucial for timely diagnosis, containment, and appropriate treatment. This article aims to provide a comprehensive guide to the symptoms associated with Orthopoxvirus infections. Orthopoxviruses are large, double-stranded DNA viruses that primarily infect mammals. They have a complex structure and replicate within the cytoplasm of infected cells. This family of viruses includes several species, such as variola virus, monkeypox virus, cowpox virus, and vaccinia virus. Although smallpox has been eradicated, other Orthopoxviruses can cause similar symptoms and pose a public health threat. Orthopoxviruses are primarily transmitted through direct contact with infected animals or humans. Animal-to-human transmission typically occurs through bites or scratches from infected animals, while human-to-human transmission occurs through respiratory droplets or contact with infectious skin lesions. Certain factors, such as close contact with infected individuals or animals, living in or traveling to endemic regions, and participating in activities like hunting or handling wild animals, increase the risk of contracting Orthopoxvirus infections. Following exposure to Orthopoxviruses, an incubation period of 7 to 14 days generally occurs before the onset of symptoms. The initial symptoms may resemble those of a flu-like illness, including fever, headache, muscle aches, fatigue, and chills. These nonspecific symptoms can make early diagnosis challenging, especially in areas where the virus is not prevalent. One of the hallmark features of Orthopoxvirus infections is the appearance of skin lesions and rashes. Lesions may

begin as raised bumps, which progress into fluid-filled blisters called vesicles. Over time, the vesicles become pustules, which then crust and scab. The development of skin lesions typically starts on the face and extremities before spreading to other parts of the body. The presence of rash and skin lesions is crucial for distinguishing Orthopoxvirus infections from other similar viral illnesses. Orthopoxvirus infections often result in lymphadenopathy, which is the enlargement of lymph nodes. The affected lymph nodes may become tender and palpable. Additionally, systemic symptoms such as malaise, loss of appetite, and generalized body pain may occur. In severe cases, individuals may experience complications involving various organs, including the lungs, liver, and brain. The severity of symptoms associated with Orthopoxvirus infections can vary widely among individuals. While some individuals may only experience mild symptoms, others may develop severe and potentially life-threatening illness. Factors such as the specific virus strain, individual immune response, and underlying health conditions can influence the severity of the disease. Orthopoxvirus infections, though rare, still pose a threat to public health. Early recognition of symptoms is vital for prompt diagnosis and appropriate management. Familiarizing oneself with the characteristic symptoms, such as the appearance of skin lesions, lymphadenopathy, and systemic symptoms, can aid in the identification of Orthopoxvirus infections. Healthcare professionals and public health authorities play a crucial role in surveillance, containment, and control measures for preventing the spread of these viruses. Public awareness and education about the symptoms, transmission, and risk factors associated with Orthopoxviruses are essential to ensure timely intervention and minimize the impact of potential outbreaks. Remember, if you suspect you may have been exposed to Orthopoxviruses or are experiencing symptoms resembling those mentioned in this article, it is important to seek medical attention promptly.

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CONFLICT OF INTEREST

The author's declared that they have no conflict of interest.