



A Review on Monkeypox Virus Shedding in Wastewater and its Persistence Evaluation in Environmental Samples

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INTRODUCTION

In the realm of infectious diseases, viruses have long been a subject of fascination and concern. Orthopoxviruses, a family of large DNA viruses, have played a significant role in human history. While smallpox, caused by the variola virus, has been eradicated, other orthopoxviruses, such as monkeypox and cowpox, continue to pose a threat to human health. Beyond the acute illness they cause, these viruses have been associated with a range of side effects that can impact individuals long after the initial infection [1]. In this article, we will explore the side effects of orthopoxvirus infections, shedding light on their implications for human health. Monkeypox, caused by the monkeypox virus, is a zoonotic disease that was first identified in monkeys in the 1950s. The virus can be transmitted to humans through direct contact with infected animals or their bodily fluids. While human-to-human transmission is less common, it can occur through respiratory droplets or close contact with infected individuals. The primary symptoms of monkeypox include fever, rash, and swollen lymph nodes [2,3]. However, the virus has been associated with several side effects that can complicate the recovery process. Post-infection complications may include lymphadenopathy (persistent swollen lymph nodes), ocular complications (such as conjunctivitis or corneal scarring), and musculoskeletal issues (such as joint pain or arthritis). Cowpox, a viral disease primarily affecting cows, has historically been associated with a mild illness in humans.

DESCRIPTION

However, it is noteworthy because of its close relation to the vaccinia virus, which was used to develop the smallpox vac-

cine. Vaccinia virus, a member of the Orthopoxvirus genus, has the potential to cause side effects following vaccination. Vaccinia virus vaccination can lead to localized complications, including erythema, swelling, and pain at the site of vaccination. Furthermore, systemic side effects may occur, ranging from mild symptoms like fever, myalgia, and malaise to severe complications like encephalitis or myocarditis. While rare, these serious side effects can significantly impact an individual's health. Immunocompromised individuals, such as those undergoing chemotherapy or with HIV/AIDS, are particularly susceptible to complications following vaccination or exposure to Orthopoxviruses. In these individuals, the virus can replicate uncontrollably and cause severe illness. For immunocompromised patients, the side effects of Orthopoxvirus infections can be devastating. Disseminated vaccinia, a life-threatening condition, occurs when the virus spreads throughout the body, leading to organ damage, pneumonia, or encephalitis. Consequently, individuals with weakened immune systems must be cautious when considering vaccination or when exposed to Orthopoxviruses. Orthopoxvirus infections can also manifest as dermatological complications, which may persist long after the resolution of the acute illness [4,5]. Scarring is a common side effect, particularly in cases of severe rash or lesions. The presence of scars can have long-lasting psychological and social implications for individuals, affecting self-esteem and quality of life. Furthermore, post-viral complications like eczema vaccinatum and progressive vaccinia can occur following smallpox or vaccinia virus infection.

CONCLUSION

Orthopoxvirus infections, despite the eradication of smallpox,

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continue to present challenges to human health. While the acute symptoms are well-known, it is essential to recognize the potential side effects associated with these viruses. From persistent lymphadenopathy to dermatological complications and mental health implications, the impact can be far-reaching and long-lasting. Understanding the side effects of orthopoxvirus infections can guide healthcare professionals in providing appropriate care and support to affected individuals. Additionally, research and public health efforts should focus on improving vaccination strategies and developing effective treatments to minimize the risk of complications and ensure the well-being of the population at large.

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CONFLICT OF INTEREST

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

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