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Monkey Pox: An Emerging Zoonoses

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Introduction

Monkey pox is a zoonotic viral disease which means this disease can be spread from animals to humans. It can also spread from person to person. Monkey pox virus is an Orthopox virus, a genus that includes camelpox, cowpox, vaccinia, and variola viruses. This disease is endemic in Western and Central Africa, which circulates in wild animal hosts and emerges periodically to affect humans, captive or wild nonhuman primates, and other species, particularly rodents.

Epidemiology

In 1958 MPV was first identified in laboratory monkeys at State Serum Institute in Copenhagen. Human monkey pox was first identified in 1970 in the Democratic Republic of the Congo in a 9-month-old boy in a region where smallpox had been eliminated in 1968. This outbreak led to over 70 cases of monkey pox in the U.S. Monkey pox has also been reported in travellers from Nigeria and Israel in September 2018, to the United Kingdom in September 2018, December 2019, May 2021 and May 2022, to Singapore in May 2019, and to the United States of America in July and November 2021. In May 2022, multiple cases of monkeypox were identified in several non-endemic countries. In India first case was reported in south Indian state of Kerala on 14 July.

Transmission

The natural route of these latter infections is presumably by the direct contact with body fluids, respiratory pathway or with virus-contaminated objects, such as bedding or clothing although autoinoculation or ingestion of viral particles, or both, are possible portals of entry. Human-to-human transmission is during the first week of the rash. Sexual transmission was suspected in a few cases, when there were lesions on the genitalia, and trans placental transmission has been documented.

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Symptoms

Monkey pox causes a range of signs and symptoms. The incubation period of the disease in experimentally infected animals has varied from 7 to 14 days in the monkeys. The most common symptoms of monkey pox include fever, headache, muscle aches, back pain and swollen lymph nodes. This is followed by the development of a rash which can last for two to three weeks. The rash can be found on the face, palms of the hands, soles of the feet, eyes, mouth, throat, groin, and genital and anal regions of the body.

Diagnosis

1. On the basis of signs and symptoms.
2. Laboratory test by isolation of the virus
3. Polymerase chain reaction (PCR) is the preferred laboratory test given its accuracy and sensitivity.
4. Serology and antigen detection methods are also helpful for the diagnosis of monkey pox virus.

Treatment

Several compounds have used as an antiviral therapeutics against Orthopox virus species. Cidofovir has antiviral activity against a variety of viruses by inhibiting viral DNA polymerase. CMX-001 and ST-246 have antiviral activity.

Prevention and Control

1. Avoid handling clothes, blankets, sheets or other materials that have been in contact with an infected animal.
2. Proper hand washing and maintain hygiene
3. Take a meal having good immune booster substances and take continue water.
4. Proper vaccination of the people resides on outbreak prone areas.
5. Isolation of infected patient from healthy people.