

Monkeypox outbreak: Must know for the clinicians

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Monkeypox cases have been recorded from several nations since early May 2022. More than 80,328 monkeypox cases with laboratory confirmation have been recorded as of November 18, 2022, from 31 nonendemic nations with more than half of those cases reported from Portugal, Spain, United states, and the United Kingdom.

Clinical symptoms

The incubation period for monkeypox can last anywhere between 5 days and 3 weeks. Symptoms such as fever, chills, weariness, headache, muscular pains, sore throat, lymphadenopathy, and skin lesions are common in patients. Skin lesions forms ulcer and crust over the course of many weeks before recovering. The present outbreak's lesions evident on or close to the genitalia or anus, near the site of inoculation. Monkeypox infections often self-limit and lasts for a month.

Pneumonia, encephalitis, and eye infections are possible complications that are most common in children under the age of 8, pregnant women, and those with impaired immune systems. Estimates for the death rate range from 1 to 11 percent.

Diagnosis

The monkeypox virus infection has close similarity with other poxviruses and herpesviruses, so differential diagnosis to be done carefully which requires the use of laboratory techniques involving polymerase chain reactions. Monkeypox diagnostic samples must be taken with a nylon, polyester, or Dacron swab, ideally from an open skin lesion. After being swabbed, the sample must be put in a dry, sterile container and kept cold or frozen until testing.

Prevention

For close contact with an infected patient, preventing monkeypox infection might be difficult. Direct contact with skin lesions or items (such clothing, beds, and towels) used by patients with monkeypox must be avoided to reduce the risk of infection. Clinicians should use personal protective equipment, such as a gown, gloves, eye protection, and a fitting N95 mask, when caring for patients with skin lesions. A person who has monkeypox infection should be promptly covered in a mask, have any lesions covered with a gown or sheet, and be isolated in a single-person room. There is no need for special air handling, but if a patient needs to be brought to the hospital, they should be put in a negative-pressure room if available. Standard cleaning and

disinfection techniques are adequate for environmental infection management, however dirty clothing should be handled with gloves to prevent contact with lesion materials.

Although the duration is uncertain, immunization against smallpox is estimated to offer up to 85% cross-protection against monkeypox. Some public health professionals have proposed that the cessation of routine smallpox immunization following the disease's eradication in 1980 may be partially to blame for the comeback of monkeypox. ACAM2000 and JYNNEOS, a modified vaccinia virus Ankara vaccine, are currently offered in the US. JYNNEOS is the only vaccine currently approved by the US Food and Drug Administration (FDA) to prevent monkeypox.

Patients who have been in close touch with someone who is afflicted with the monkeypox virus can also receive the JYNNEOS postexposure vaccination. The Centers for Disease Control and Prevention (CDC) advises vaccination within 4 days of exposure to prevent disease or 14 days after exposure to minimize the severity of infection. Although the CDC has advised that the JYNNEOS vaccine be given to close contacts of monkeypox patients, this vaccine is currently difficult to get.

Treatment

Since there is no specific antiviral medication for monkeypox, treatment focuses largely on symptom management. Patients with severe illness, those who are immunocompromised, children under the age of 8, and women who are pregnant should be given consideration for antiviral medication after clinical consultation.

Tecovirimat and brincidofovir are two antiviral medications that may be used to treat monkeypox infections at the moment. The highly conserved protein p37, which is present in all orthopoxviruses, is inhibited by tecovirimat, preventing the development of the viral envelope. The CDC has an Expanded Access-Investigational New Drug (EA-IND) protocol that permits for the use of tecovirimat in nonvariola orthopoxviruses like monkeypox virus.

Brincidofovir is a precursor of cidofovir, which is used to treat cytomegalovirus (CMV) retinitis in acquired immunodeficiency syndrome (AIDS) patients. Based on severity intravenous vaccinia immune globulin (VIGIV) can be used too but there is doubt about the efficacy.

Monkeypox virus infection is currently on a red alert predominantly infecting men who have sex with men. To scrub the situation, early alerts, routine monitoring, appropriate diagnosis, tracing of infected individuals could be the best adoptable strategy in the global outbreak.

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lesion, infection, patient, skin, vaccine

Abbreviations

Acquired immunodeficiency syndrome (AIDS), Centers for Disease Control and Prevention (CDC), cytomegalovirus (CMV), Expanded Access-Investigational New Drug (EA-IND), Food and Drug Administration (FDA), Intravenous vaccinia immune globulin (VIGIV)

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