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''A REVIEW ON HUMAN MONKEY POX: - CAUSES, SYMPTOM, TRANSMISSION AND PREVENTION''

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Abstract

After the outbreak of corona one new disease is ready to challenge the health system of all countries in the world. Now a new disease is starting to spread all over the world on large scale, i.e. Monkey Pox. Monkey Pox is an infectious disease caused by monkey pox virus. This disease is similar to small pox. Monkey pox is a viral disease caused by the monkey pox virus, a species of genus orthopox virus. T he monkey pox virus was discovered in Denmark in 1958 in monkeys kept for research and the first reported human case of monkey pox was a nine-month-old boy in the Democratic Republic of the Congo (DRC, 1970). Monkey pox can spread from person to person or occasionally from animals to people. The common symptoms of monkey pox are skin rashes or mucosal lesions which can last for 2-4 weeks with fever, muscle ache, headache, back pain, low energy, and swollen lymph's nodes. Monkey pox can be transmitted to human through physical contact with someone who is infectious with contaminated materials, or with infected animals. Laboratory confirmation of monkey pox is done by testing skin lesions by PCR. Two different clades exists clade I and Clade II. Monkey pox can be prevented by avoiding direct contact with someone who has monkey pox. Vaccination can help prevent infection for people at risk. This article gives a comprehensive review for the causes, symptoms, Transmission and caused for monkey pox.

Key Words: - Monkey pox, Virus, PCR, Mpox etc

Introduction

Monkeypox virus is an Orthopoxvirus, a genus that includes camelpox, cowpox, vaccinia, and variola viruses [1]. Monkeypox was first identified in 1958 at a laboratory in Copenhagen, Demark when it was discovered in monkeys that had been imported from Singapore a couple of months earlier. Monkeypox disease now has a new name: mpox. The first reported human case of mpox was a nine-month-old boy in the Democratic Republic of the Congo (DRC, 1970). Mpox can spread from person to person or occasionally from animals to people. [2] Mpox (monkeypox) is a viral illness caused by the monkeypox virus, a species of the genus Orthopoxvirus. Two different clades exist: clade I and clade II Common symptoms of mpox are a skin rash or mucosal lesions which can last 2–4 weeks accompanied by fever, headache, muscle aches, back pain, low energy, and swollen lymph nodes. Mpox can be transmitted to humans through physical contact with someone who is infectious, with contaminated materials, or with infected animals. Laboratory confirmation of mpox is done by testing skin lesion material by PCR. Mpox is treated with supportive care. Vaccines and therapeutics developed for smallpox and approved for use in some countries can be used for mpox in some circumstances. In 2022–2023 a global outbreak of mpox was caused by a strain known as clade IIb. Mpox can be prevented by avoiding physical contact with someone who has mpox. Vaccination can help prevent infection for people at risk.[3]

Causes and Symptoms

Mpox spreads when you come into contact with an animal or a person infected with the virus.Person-to-person spread (transmission) occurs when you come in contact with the sores, scabs, respiratory droplets or oral fluids of a person who's infected, usually through close, intimate situations like cuddling, kissing or sex. Research is ongoing, but experts aren't sure if the virus is transmitted through semen or vaginal fluids. Animal-to-person transmission occurs through broken skin, like from bites or scratches, or through direct contact with an infected animal's blood, bodily fluids or pox lesions (sores).You can also get mpox by coming into contact with recently contaminated materials like clothing, bedding and other linens used by a person or animal who's infected. [4] The majority of clinical symptoms of mpox are similar to small pox disease. Initially febrile prodome is accompanied by general headache and fatigue. Enlarged lymph nodes are firm, tender and sometime painful. [1] Following are the signs and symptoms of mpox. After exposure, it may be several days to a few weeks before you develop symptoms. Signs of mpox include:Fever, Rash, Swollen lymph nodes ,Chills, Headache, Muscle aches, Fatigue. The rash starts as flat, red bumps, which can be painful. Those bumps turn into blisters, which fill with pus. Eventually, the blisters crust over and fall off. The whole process can last two to four weeks. You can get sores on your mouth, face, hands, feet, penis, vagina or anus.Not everyone with mpox develops all the symptoms. Different ways you might experience symptoms include:Only a rash (no other symptoms), or other symptoms developing later. Flu-like symptoms, then a rash. Some people don't get a rash at all. A rash can be widespread, but

some people only a have few bumps or blisters. You can have mpox and not know it. Even if you don't show many signs of infection, it's possible that you can spread still spread it to others through prolonged close contact. [4]

Transmission

Person-to-person transmission of mpox can occur through direct contact with infectious skin or other lesions such as in the mouth or on genitals; this includes contact which is face-to-face (talking ,breathing ,sneazing, coughing), skin-to-skin (touching or vaginal/anal sex), mouth-to-mouth (kissing), mouth-to-skin contact (oral sex or kissing the skin) respiratory droplets or short-range aerosols from prolonged close contact The virus then enters the body through broken skin, mucosal surfaces (e g oral, pharyngeal, ocular, genital, anorectal), or via the respiratory tract. Mpox can spread to other members of the household and to sex partners. People with multiple sexual partners are at higher risk. Animal to human transmission of mpox occurs from infected animals to humans from bites or scratches, or during activities such as hunting, skinning, trapping, cooking, playing with carcasses, or eating animals. The extent of viral circulation in animal populations is not entirely known and further studies are underway. People can contaminate to mpox from contaminated objects such as clothing or linens, through sharps injuries in health care, or in community setting such as tattoo parlours .

Prevention

Most people with mpox will recover within 2–4 weeks. Things to do to help the symptoms and prevent infecting others: Followings are the do's and don't's for helping to avoid the contamination of mpox.

Do's

- stay home and in your own room if possible
- wash hands often with soap and water or hand sanitizer, especially before or after touching sores
- wear a mask and cover lesions when around other people until your rash heals
- keep skin dry and uncovered (unless in a room with someone else)
- avoid touching items in shared spaces and disinfect shared spaces frequently
- use saltwater rinses for sores in the mouth
- take sitz baths or warm baths with baking soda or Epsom salts for body sores
- take over-the-counter medications for pain like paracetamol (acetaminophen) or ibuprofen.

Do not's

- pop blisters or scratch sores, which can slow healing, spread the rash to other parts of the body, and cause sores to become infected; or
- shave areas with sores until scabs have healed and you have new skin underneath (this can spread the rash to other parts of the body).

To prevent spread of mpox to others, persons with mpox should isolate at home, or in hospital if needed, for the duration of the infectious period (from onset of symptoms until lesions have healed and scabs fall off). Covering lesions and wearing a medical mask when in the presence of others may help prevent spread. Using condoms during sex will help reduce the risk getting mpox but will not prevent spread from skin-to-skin or mouth-to-skin contact. [3]

Mpox vaccines

Vaccines developed for smallpox also provide protection against mpox. Mpox vaccines are currently only recommended for people who've been exposed to, or are likely to be exposed to, mpox. You might be at higher risk of exposure if:

- You've been in close contact with someone with mpox.
- Someone you've had sex with in the past two weeks has been diagnosed with mpox.
- You've had sex at a sex club, bathhouse or other commercial sex venue in the past six months.
- You've had sex at an event or location where mpox was spreading.
- You have a sex partner who's been in any of the above situations.
- You expect to be in one of the above situations.
- If you're a man who has sex with men, a transgender person or a nonbinary person, you may also be at risk.
- If you've: Been diagnosed with one or more sexually transmitted infections (STIs) in the past six months. This includes acute HIV, gonorrhea, syphilis, chancroid or chlamydia.
- Had sex with more than one person in the past six months.

It's important to get vaccinated before or as soon as possible after exposure. Talk to a healthcare provider if you're unsure if you should get vaccinated. If you'd like to get your shot in a more concealed location on your body, your provider can give it to you in your shoulder blade instead of your forearm [4].

Diagnosis

Identifying mpox can be difficult as other infections and conditions can look similar. It is important to distinguish mpox from chickenpox, measles, bacterial skin infections, scabies, herpes, syphilis, other sexually transmissible infections, and medication-associated allergies. Someone with mpox may also have another sexually transmissible infection such as herpes. Alternatively, a child with suspected mpox may

also have chickenpox. For these reasons, testing is key for people to get treatment as early as possible and prevent further spread. Detection of viral DNA by polymerase chain reaction (PCR) is the preferred laboratory test for mpox. The best diagnostic specimens are taken directly from the rash – skin, fluid or crusts – collected by vigorous swabbing. In the absence of skin lesions, testing can be done on oropharyngeal, anal or rectal swabs. Testing blood is not recommended. Antibody detection methods may not be useful as they do not distinguish between different orthopoxviruses.[3]

Conclusion

Monkey Pox is an infectious disease caused by monkey pox virus. This disease is similar to small pox. Monkey pox is a viral disease caused by the monkey pox virus, a species of genus orthopox virus. The vaccines are vailable for preventing small pox but only available in united state as mpox disease is spreading worldwide , vaccine production required to be done on all the countries till we require to do some preventive measures to avoid the contamination of mpox. Vaccination is an important measure to protect people whose jobs may expose them to Orthopoxviruses. Currently, no particular therapeutics are available for monkeypox, and the anti-viral agents developed against the smallpox virus are being used to treat monkeypox infection. So prevention is very important to avoid the attack of mpox virus. This article gives a short review for the prevention of small pox.

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