



## Causes and Treatment of Monkey Pox

Marcel Wuthrich\*

Department of Infectious Diseases, University of Texas Health Science Center, San Antonio, USA

### DESCRIPTION

The virus that causes monkeypox is a rare condition. Rash and flu-like symptoms result from it. It belongs to the orthopoxvirus family, just as the more well-known virus that causes smallpox. Two outbreaks of a disease that looked like the pox in groups of monkeys being used for research in 1958 led to the discovery of monkeypox. Although it usually spreads by skin-to-skin contact with an infected person, it can also happen through contact with infected rodents. The *Orthopoxvirus* genus of the *Poxviridae* family contains the enclosed double-stranded DNA virus known as the monkeypox virus. In the past, the Congo Basin clade was thought to be more contagious and to produce more severe illness. The only nation where both viral clades have been discovered is Cameroon, which serves as the geographic boundary between the two groups [1].

Direct contact with the blood, body fluids, cutaneous or mucosal lesions of infected animals can result in animal-to-human (zoonotic) transfer. Rodents are the most plausible candidates for the monkeypox natural reservoir, though this has not yet been determined [2]. Eating undercooked meat and other diseased animal products is a potential risk factor. People who live in or close to forests may be indirectly or minimally exposed to diseased animals.

Close contact with respiratory secretions, skin sores on an infected person, or recently contaminated objects can cause human-to-human transmission. Health professionals, family members, and other close contacts of current patients are more at risk because droplet respiratory particles typically require extended face-to-face contact [3]. The number of person-to-person infections in a community's longest documented chain of transmission has increased from 6 to 9 in recent years.

Monkeypox takes a while to develop. This means that after a person has been exposed to the virus, it can take four to 21 days for them to become unwell. The first sign of the illness is a generalized, all-over feeling of being unwell. Flu-like symptoms progress to fever and muscle aches. Swollen lymph nodes develop. A few days later, a rash with blisters that resembles chickenpox occurs. If acquired sexually, it could start in the

vaginal or anal regions and spread to other parts of the body after starting on the face. A week or two later, the rash clears up, and healing proceeds. Monkeypox lasts for two to four weeks overall.

Other rash disorders, such as chickenpox, measles, bacterial skin infections, scabies, syphilis, and medication-associated allergies, must be taken into account when making a clinical differential diagnosis.

As a clinical characteristic, lymphadenopathy during the prodromal stage of the illness can help differentiate monkeypox from chickenpox or smallpox. Health professionals should get the right sample and arrange for it to be delivered safely to a lab with the right equipment if monkeypox is detected. The kind of laboratory test used and the type and quality of the specimen used determine whether monkeypox is confirmed [4]. As a result, specimens should be sent and handled in line with local, state, and federal regulations. Given its precision and sensitivity, Polymerase Chain Reaction (PCR) is the primary laboratory test. The best diagnostic samples for monkeypox come from skin lesions, such as dry crusts and the liquid that comes from vesicles and pustules. Biopsy is a possibility when it is possible. Lesion samples must be maintained cool and stored in a dry, sterile tube without viral transport medium. Due to the short period of viremia in relation to the date of specimen collection after symptoms begin, PCR blood tests are typically inconclusive and should not be regularly obtained from patients.

Antigen and antibody detection techniques do not offer proof of monkeypox-specific infection because orthopoxviruses are serologically cross-reactive [5]. Therefore, in cases where resources are scarce, serology and antigen detection procedures are not advised for diagnosis or case inquiry. Furthermore, recent or distant immunisation with a vaccinia-based vaccine (for example, anyone immunised prior to the eradication of smallpox, or more recently due to heightened risk, such as orthopoxvirus laboratory employees) may result in false positive results.

Vaccines including Jynneos (which the Food and Drug Administration has approved for monkeypox), when given early enough after exposure, may lessen the severity of the disease,

**Correspondence to:** Marcel Wuthrich, Department of Infectious Diseases, University of Texas Health Science Center, San Antonio, USA, E-mail: wuthr@257.com

**Received:** 29-Jun-2022, Manuscript No. CMO-22-17729; **Editor assigned:** 04-Jul-2022, Pre QC No. CMO-22-17729(PQ); **Reviewed:** 21-Jul-2022, QC No. CMO-22-17729; **Revised:** 26-Jul-2022, Manuscript No. CMO-22-17729(R); **Published :** 04-Aug-2022, DOI: 10.35248/2327-5073.22.11.297.

**Citation:** Wuthrich M (2022) Causes and Treatment of Monkey Pox. Clin Microbiol.11:297.

**Copyright:** © 2022 Wuthrich M. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

so health care professionals may recommend vaccines for those who have had close contact with a person who is infected. Also, antivirals are being tested to see if they are safe and effective in easing symptoms.

Monkeypox occurs mainly in the jungles of central and western Africa. The disease, unlike smallpox, is a typical zoonosis in that most cases occur as a result of direct contact with an infected animal. The symptoms of the disease in humans can be very similar to those of smallpox, chickenpox, or other causes of vesiculopustular rash; therefore, accurate and rapid laboratory diagnostics are paramount in controlling an outbreak.

## REFERENCES

1. Ladnyj ID, Ziegler P, Kima E. A human infection caused by monkeypox virus in Basankusu Territory, Democratic Republic of the Congo. *Bull World Health Organ.* 1972; 46(5):593.
2. Nguyen PY, Ajisegiri WS, Costantino V, Chughtai AA, MacIntyre CR. Reemergence of human monkeypox and declining population immunity in the context of urbanization, Nigeria, 2017-2020. *Emerg Infect Dis.* 2021; 27(4):1007.
3. Arita I, Jezek Z, Khodakevich L, Ruti K. Human monkeypox: a newly emerged orthopoxvirus zoonosis in the tropical rain forests of Africa. *Am J Trop Med Hyg.* 1985; 34(4):781-789.
4. Srivastava G, Srivastava G. Human Monkeypox Disease. *Clin Dermatol.* 2022.
5. Bunge EM, Hoet B, Chen L, Lienert F, Weidenthaler H, Baer LR, et al. The changing epidemiology of human monkeypox-A potential threat? A systematic review. *PLoS Negl Trop Dis.* 2022; 16(2):e0010141.