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Research Article



Conversance Survey of "Monkeypox Disease" An Emerging Global Emergency

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Abstract:

Monkeypox is a viral infection which was originated from the monkeypox virus in the United Kingdom. It is a double-standard DNA virus belonging to the Orthopoxvirus genus and poxviridae family. It was first found in 1958 in monkeys. The first human case of monkeypox was detected in 1970 and the outbreak in 2022. Monkeypox had been reported in people living in several central and western African countries. Despite being named "monkeypox, "the disease's source is still unknown. However, African rodents and monkeys might harbor the virus and infect people.

It typically starts with rashes, and fever, and may lead to complications if not detected earlier. Its transmission can occur from human to human via skin contact, droplets, and even via the placenta from mother to fetus and also through animals to humans via mucosal lesions and blood of infected animals. Till today there is no secure treatment for monkeypox. The awareness survey was conducted in the period between 29th August 2022 to 30th September 2022 and with the help of google Forms, a self-made questionnaire was created and circulated via social media. The purpose of creating these questions was to see the basic knowledge and to know people's awareness about the monkeypox virus. The software used to record the responses of people is Microsoft excel. The study we conducted was cost-effective and time efficient and illustrated every point through tables and pie charts.

Keywords: Monkeypox, Awareness, symptoms, Antiviral treatment.

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Introduction:

Monkeypox is currently a rare zoonotic disease that is caused by the monkeypox virus belonging to the poxviridae family, chordopoxvirinae subfamily & Orthopoxvirus genus. It originated from the initial discovery of the virus in monkeys in a Danish Lab in 1958. However, it was not recognized as a human disease until 1970. In 1970 First case was reported in a 9-month-old child in Zaire [now the DRC (the Democratic Republic of the Congo)]. From that time, it has become endemic in DRC (the Democratic Republic of the Congo) & has spread in Western and Central Africa. The virus is present both in skin lesions and in droplets exhaled while breathing and may get transmitted through respiratory droplets, direct or indirect contact with body fluid. The virus penetrates through broken skin, and mucous membranes, and it can cross the placenta and produce miscarriage, and may lead to fetal death. The incubation period of monkey pox disease is about 7 to 15 days. It can depend upon the initial health of the individual and the route of exposure.^{1,2}

Transmission:

It is transmitted from Animal to human Via Bites / Scratches from infected Animals, hurting, cooking & consumption of infected Animals, through Bodily fluids may be through mucosal lesions. It can also be transmitted from human to human through Physical contact, Respiratory Droplets, Direct contact with cutaneous Lesions, or contaminated objects.³

Sign & Symptoms:

The common symptoms include fever, headache, myalgia (pain in muscles), Backache, Lymphadenopathy (swallowing in the lymph nodes), chills exhaustion. If it became complicated symptoms can be Respiratory distress, dehydration, and cellulitis (an infection that causes redness on the skin).

Stages of vesiculo-Pustular Rashes in monkeypox Infected Patients.

The hallmark feature of monkeypox is vesiculopustular rashes and these rashes go through several Stages which include Enanthem, Macules, papules, Vesicles, pustules & Crusting.

Stage 1

Enanthem: - This includes the development of lesions on the tongue & mouth (1-2 days).

Stage 2

Macules: - These include lesions on the face & spreading to arms, legs & hands (Last for 1-2 days).

Stage 3

Papules: - In this stage, the rashes size increases and raises (Last for 1-2 days).

Stage 4

Vesicles: - In this stage Lesions are filled with clear fluid (Last for 1-2 days).

Stage 5

Pustules: - In this stage Lesions become filled with opaque fluid sharply raised (Last for 5-7 days).

Stage 6

Crusting: - It includes hypopigmentation & hyperpigmentation on the infected area and may remain once all the scabs have fallen off (7-14 days).

Stage	Specification	Representation	Stage Duration
Enanthema	It is more widespread skin involvement, which can be composed of several lesions with primary & secondary morphologies	No. of the second se	1-2 days
Macules	Flat lesion <1 cm in diameter	•••••••••••••••••••••••••••••••••••••••	1-2 days
Papules	An elevated lesion that is <1cm in diameter		1-2 days
Vesicles	Small fluid containing lesion that is < 0.5cm	A A A A	1-2 days
Pustules	Vesicles containing purulent material may be white or yellow is not always infected		5-7 days
Crusting	A hard coating on the skin formed during the wound healing reconstruction phase		7-14 days

Treatment:

There is no specific treatment for monkeypox disease until now, but Tecovirimat (also knoas TPOXX, ST-246) may be used for 14 days with a dose of 600mg (which is FDA approved). Tecovirimat was for smallpox and European Medicine Agency licensed it for monkeypox which is currently not available. Internationally more research is been done before any treatment or vaccine can be commissioned. For prophylaxis for monkeypox disease, we can use the cidofovir vaccine. This vaccine is mainly used for smallpox viral disease.⁴

Methodology:

An observational and cross-sectional study was conducted in the period between 29th August 2022 to 30th September 2022 and with the help of google Forms, a self-made questionnaire was created according to CDC guidelines, ministry of health, and family welfare guidelines and circulated via social media. About 126 peoples were interested in giving their responses through smartphones and computers and their responses were recorded through google Forms and analyzed with the help of Microsoft excel. The main agenda to concerned this survey was to see how much people are aware of monkeypox disease.⁵

Elaboration of responses recorded

According to statical analysis, 56% of people are medical students, 16% are non-medical and the remaining 28% were from another profession. Table 1: The list shows the occupations.



Options	Total count	Percentage
MEDICAL	67	560/
STUDENT	07	5070
NON-MEDICAL	10	160/
STUDENT	19	1070
OTHER	22	200/
PROFESSION		2870

Table 1

Our perspective study shows that around 79.5% of participants choose monkeypox as a viral disease, 9.8% choose it as a bacterial disease, 9.8% of participants marked it as a fungal disease, and the remaining 0.80% marked it as an orthoposevirus. Table 2: Shows the list of microorganisms.⁶

Monkey pox is which kind of disesase 112 responses



Option	Total count	Percentage
Viral	97	79.5%
Bacterial	12	9.8%
Fungal	12	9.8%
Orthoposvirus	1	0.8%

Table 2

Around 39.3% out of 122 participants marked YES, it is a deadly disease, 16.4% participants marked NO it is not a deadly disease, and the rest 44.3% participants marked as MAYBE it is a

deadly disease. Which is listed below in table no 3.



122 responses



Option	Total count	Percentage
Yes	48	39.3%
No	20	16.4%
May be	54	44.3%

Table 3

Our study shows that around 84.1% out of 121 participants were aware of the symptoms of monkeypox diseases whereas 13.2% of participants were unaware of the symptoms of monkeypox disease. Which is listed below in table no 4.

Symptoms of Monkeypox 121 Responses



Option	Total count	Percentage
Swollen lymph, chills, fever, headache, blisters form	101	84.1%
Other Symptoms	20	16.9%

Table 4

With the ongoing survey, we learned that 63.7% out of 124 participants were aware of how people get infected through monkeypox disease, and the rest, 36.3%, were unaware. Which is listed below in table no 5.

How does a person get infected with Monkeypox disease 124 responses



Table 5

According to table no 6 given below, it is clear that 21% of the participants opted for YES there is a vaccine for monkeypox disease and 54.8% of the participants opted for NO which means the vaccine is not available for monkeypox disease and the remaining 24.2% participant opted

MAYBE that means vaccine for monkeypox disease is available or may not be available.⁷ Is vaccine available for Monkeypox

124 responses



Option	Total count	Percentage
Yes	21	21%
No	68	54.8%
May be	35	24.2%

Table 6

According to prospective studies around 66.7% out of 117 participants opted yes for PCR as the diagnostic test for monkeypox disease and 29.1% of the participants marked CBC as the diagnostic test for monkeypox disease and the remaining is listed in table no 7 given below.



Option	Total Count	Percentage
PCR	78	66.7%
CBC	33	29.1%
Sample of fluid swapped from the	6	4 2%
rash	v	7.270

Table 7

In addition, a prospective study shows that 89.7% out of 117 participants marked the actual incubation period for monkeypox disease which is 7 to 15 days, and the remaining 10.3% of the participant not marked the actual incubation period for monkeypox disease. Which is shown in table no 8 given below.⁸

Incubation Period of Monkey pox disease 117 responses



According to our statical study, 42.3% out of 117 participants marked 12 countries that were infected by the monkeypox virus in the month of May 2022, and 57.7% out of 117 participants

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marked more than 12 countries that were infected by monkeypox virus which was a wrong selection. As shown in table no. 9 that is given below.

Countries are affected by the monkeypox in May 2022 111 responses



Option	Total Count	Percentage
12 countries	47	42.3%
More than 12 countries	64	57.7%

Tat	ole	9

According to our report, 51.8% out of 112 participants opted for skin rashes to differ between chickenpox and monkeypox, and 48.2% out of 112 participants opted for other differences between chickenpox and monkeypox. As shown in table no. 10 that is given below,

Symptoms mainly differ between chickenpox and monkeypox 112 responses



Option	Total Count	Percentage
Skin rashes	58	51.80%
Other symptoms	54	48.20%

Table 10

Result:

As per our observational prospective crosssectional study, we came to know that most of the people who answered the questionnaire which was created by us on google form were belonging to medical backgrounds and approximately 58% of the participants were well aware of monkeypox disease and the virus through which it gets spread.9,10 They all were also aware of the symptoms and transmission of the virus and were taking proper precautions so that they don't come in contact with the monkeypox virus. The main reason for the spreading of the virus is close contact with infected humans or with infected animals. The incubation period for monkeypox disease is approx. 7- 15 days.^{11,12} the proper treatment for this disease is still not found yet but we are treating the patient by giving symptomatic treatment.¹³

Conclusion:

This whole Article concludes that monkeypox is a rare viral zoonosis (a virus transmitted to humans from animals) pandemic Monkeypox is a disease that was primarily in western & central Africa and is transmitted through direct contact with humans or with infected animals. Monkeypox virus is an enveloped double stand and DNA virus belonging to the genus Orthopoxvirus & poxviridae family. It has an incubation period of 7-14 days. The disease has the same clinical presentation as chickenpox with rashes on the body but differs in the blister size. The treatment of the disease is still unknown but scientists are trying their best to provide a vaccine for monkeypox as soon as possible.

This survey depicts the awareness of monkeypox and we have discussed and illustrated every single point with appropriate pie charts and tables.

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Conflict of interest: None

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