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Editorial

Monkeypox Virus a New Pandemic

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The World Health Organization's {WHO} most recent from 21 May indicate that there are around 100 cases in 12 non -endemic countries though there could be around 300 confirmed or suspected cases in 16 non epidemic countries.

Since the spread of the virus is not linked to imported cases. WHO has been warned the cases identified so far could be. The tip of ice berg in both endemic are Benin, Cameroon, the central African republic, the democratic republic of the Congo Gabon, Ghana, [identified in animals only] Ivory Coast, Liberia, Nigeria. The republic of the Congo, Sierra Leone and South Sudan and non endemic countries like USA, UK, Belgium, France, Germany, Italy, Netherlands, Portugal, Spain, Sweden, Australia, Canada Austria, Canary Islands, Israel, and Switzerland.

Monkeypox is a viral zoonotic disease that occurs primarily in tropical rainforest areas of central and west Africa and is occasionally exported to other regions, Monkeypox typically presents clinically with fever, rash and swollen lymph nodes and may lead to a range of medical complications. Monkey pox is usually a self-limited disease with the symptoms lasting from 2 to 4 weeks, Severe cases can occur. Case fatality rate may vary from 1-10%.

Monkeypox animal to human transmission may occur by bite or scratch bushmeat preparation (bushmeat is meat from wildlife species, direct contact with body fluids or lesion material or indirect contact through contaminated blood.

Figure 1

Isolated cases of the disease have been seen in the past in the US, Singapore and UK. The current outbreak in non - endemic countries suggests that sustained human to human transmission is quite feasible, so it suggests that ongoing human transmission could also be happening in Africa scale than generally thought.

Human to human transmission is thought to occur primarily through large respiratory droplets generally requiring a prolonged close contact.IT can also be transmitted through contact with body fluid or lesion material and indirect contact with lesion material such as through contaminated clothing or linens of an infected person. The clinical presentation of monkeypox resembles that of smallpox, a related orthopoxviral infection which was declared eradicated worldwide in 1980. Monkeypox is less contagious than smallpox and causes less severe illness. Incubation period is usually 7-14 days but can range from 5-21 days and the person is

usually not contagious during this period. An infected person may transmit the disease from 1-2 days before appearance of the rash and remain contagious till all the scabs fall off.

Human to Human transmission from 1970s to 1980s and around the world has changed greatly over the last decades. This means that the epidemiology our understanding of who gets sick and why of disease is likely to have changed too, Also the virus has been studied in specific settings in West and Central Africa and virus don't necessary behave the same in different contexts. This current international outbreak is clearly behaving different from the previous ones.

Figure 2

At present almost 1200 people have become infected with monkeypox and 58 have died this year, though mass vaccination is not yet needed and targeted vaccination strategies with vaccines from the smallpox stockpile as well as other public health measures such as quarantine and isolation can contain the out breaks.

Moderna is testing potential vaccines in pre- clinical trials. Although the smallpox vaccines do well against monkeypox most contain replicating live virus and carry some risk.

The genome of mutations of the monkey pox virus from the current outbreak and it looks similar to the strains found in 2018 and 2019 in UK, Israel and Singapore. Till now it is not clear whether or not the virus has mutated which could explain its sudden ability to spread more widely then previously in non-endemic countries, As a DNA Virus monkeypox is likely to undergo significant mutations than a RNA virus like SARS-CoV-2, the virus that causes COVID-19, but such mutations are possible. But this may take time to determine as the monkey box genome is much larger than that of SARS-CoV-2-. It has around 200,000 DNA letters compared with 30,000 RNA Letters and is not as well studied.

Figure 3

Monkeypox which primarily spreads through animal to human interaction, is not known to spread easily between humans most individuals infected with monkeypox pass the virus to between zero to one person, so outbreaks typically fizzle out for the reason the fact that outbreaks are occurring in several countries simultaneously is concerning for health authorities and organizations that monitor viral transmission. Experts are entertaining the possibility that the virus rate of transmission has increased [1-7].

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