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Monkeypox: A potential pandemic at door of Asia

To the Editor,

Monkeypox is an emerging zoonotic viral disease first detected in the parts of North Africa in the 1970s. It us caused by a monkeypox virus (MPXV) which is a double-stranded DNA virus and is a species of genus Orthopoxvirus of the family Poxviridae [1]. It is very closely related to the variola virus responsible for causing smallpox and also results in a smallpox like disease. Infection by this virus has small rodents as its natural reservoirs and both monkeys and humans are occasional hosts. Since the first human case in Democratic Republic of Congo (DPR) in 1970, the disease has been confined to the African region particularly the West and Central African countries [2]. It took nearly 30 years for the virus to spill over across to United States of America (USA) when a sporadic outbreak was reported in 2003 [3]. Since then, very few cases have been reported from across the globe with all of them linked to travel to endemic countries.

Recently in May 2022 a multi-country outbreak of the disease began affecting several continents. By the end of June an upsurge was seen in the number of cases worldwide with majority of them being detected from non-endemic countries. The surprising fact is that most of the confirmed cases reported a travel history to Europe and North America, rather than any African country where it is endemic. Majority of the cases were males aged between 20 and 40 years and most of them were men having sexual intercourse with men (MSM) [4]. Given the potential spread of the epidemic, WHO finally had to declare the monkeypox epidemic as a global public health emergency, which is the WHO's highest level of public health alert.

As on August 11, 2022, a total of 31,800 confirmed cases of monkeypox have been reported from 89 countries [5]. The maximum toll of the outbreak has fallen on the American and the European countries with more than 90% of the cases belonging to this region. A disease which was always thought to be restricted to the African continent has now jumped across boundaries and now has engulfed the entire world. On May 7, 2022, the first confirmed case of monkeypox was detected outside Africa in United Kingdom. It was considered as the index case and was identified as a UK citizen with recent travel to Nigeria [6]. Subsequently other European countries also reported several cases with majority being from Germany, Spain and France. United States of America (USA) reported its first case on May 17, 2022 and the numbers have risen sharply to 10,392 cases as on August 11, 2022 [7]. Given the risk of this epidemic spreading, the WHO finally had to declare the monkeypox epidemic as a global public health emergency, which is the WHO's highest level of public health alert.

The Asian continent was not spared till late and on May 21, 2022, the Israeli Health Ministry reported the first confirmed case of Monkeypox from the country, which also became the first in Asia [8,9]. This particular patient was travelling from Western Europe and had contracted the disease there. Three days later United Arab Emirates (UAE) reported its first case on may 24, 2022. Till the end of May 2022, no other Asian country was affected by the disease. In the next two months several confirmed cases of monkeypox were reported from various Asian countries with majority from Israel, UAE and Singapore (Fig. 1). Singapore was the first South-east Asian country to report a monkeypox case when a British flight attendant tested positive on June 21, 2022 [10]. Most of the confirmed cases in Singapore were imported from Europe with some a few also showing local transmission. Taiwan also reported its first case on 24th June when a 25-year-old Taiwanese student returned from Germany [11]. UAE significantly contributed to the spread of the disease to India with the first three confirmed cases being travellers who were returning from the Arab nation to Kerala, a state in South India [12]. Till date a total of 198 confirmed cases have been reported from Asia with Israel contributing more than 73% (146) of the total. India has reported the only death from the region, when a male who had tested positive for monkeypox in UAE travelled to Kerala and died due to encephalitis.

With confirmed cases of monkeypox also being reported from neighbouring countries of China (Japan and South Korea) and restoration of flights, importation of cases into the country is just inevitable. In regards to this, the Chinese government issued the "Monkeypox diagnosis and treatment guidelines" in June 2022 and also stringent measures to screen travellers from endemic countries for any symptoms.

Although the risk of a monkeypox outbreak in the South-east Asian region is moderate the potential of its spread is very real. Restrictions on travel and on border just delay the disease as was seen during COVID-19, thus the monkeypox outbreak will spread and we need to be prepared. The huge increase in cases in USA and Europe was mainly due to travel, tourism and trad and Asia being the main centre of tourism for the rest of the world will always attract millions of tourists. With most of the cases in Asia being imported from European and American countries, there is a huge risk of spread in the region given the high density of population. Asian countries like Sir Lanka, Nepal, Bhutan, Myanmar etc, which depends on tourism will be more affected economically. Travel and trade will be hampered in India and China affecting the regional and global economy. As Sir Lanka already declared as bankrupt, it is very bad news for Sir Lankans of monkeypox approaching in Asia. The governments must take a note of this and therefore establish a comprehensive disease surveillance system in order to detect the cases early and diagnose them and further quarantine and manage them. Emphasis should also be on enhancing border control to prevent spread of the disease. Also need of hour is to develop vaccine and antiviral drugs as urgently demanded in the current status with a future outbreak of monkeypox in mind.

Consent

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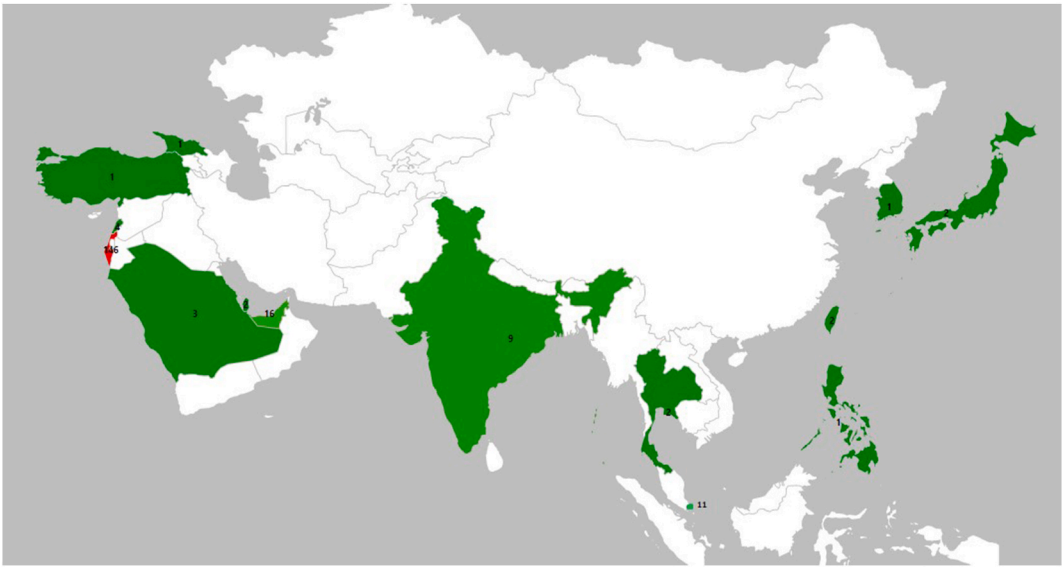

Fig. 1. Monkeypox reported in Asian Countries.

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Declaration of competing interest

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References

[1] ICTV) ICoToV, Virus taxonomy: 2020 release, Available from, https://talk.ictvonline.org/taxonomy.
[2] I.D. Ladnyj, P. Ziegler, E. Kima, A human infection caused by monkeypox virus in Basankusu Territory, Democratic Republic of the Congo, Bull. World Health Organ. 46 (1972) 593–597.
[3] C.D.C. Multistate, Outbreak of monkeypox–Illinois, Indiana, and Wisconsin, MMWR 606 Morb Mortal Wkly Rep. 52 (2003) 537–540, 2003.
[4] D. Kopecki, Monkeypox outbreak is primarily spreading through sex, WHO officials say (2022). https://www.cnbc.com/2022/05/23/monkeypox-outbreak-is-primarily-spreading through-sex-who-officials-say.html. (Accessed 19 July 2022).
[5] CDC, Monkeypox Outbreak Global Map, 2022. https://www.cdc.gov/poxvirus/monkeypox/response/2022/world-map.html.
[6] WHO. Home/Disease Outbreak News/Item/Monkeypox - United Kingdom of Great Britain and Northern Ireland, https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON381.
[7] U.S. Monkeypox Case, Trends reported to CDC. https://www.cdc.gov/poxvirus/monkeypox/response/2022/mpx-trends.html.
[8] Ido Efrati, Israel Confirms First Case of Monkeypox Virus, Haaretz. Retrieved, 5 June 2022.
[9] Israel, Switzerland Report First Monkeypox Cases as Virus Spreads". Al Jazeera. Retrieved 2022-06-04.
[10] Low De Wei, Melissa Cheok, Danny Lee, 22 June, Singapore Confirms City's First Monkeypox Case in British Flight Attendant". Bloomberg, 2022. Retrieved 22 June 2022.
[11] Chieh-ling Chen, Kay (24 June Liu, Taiwan Reports First Monkeypox Case, Central News Agency, 2022. Retrieved 29 June 2022.
[12] World Health organization. South-East Asia. India confirms first case of monkeypox in WHO South-East Asia Region. India confirms first case of monkeypox in WHO South-East Asia Region (Accessed on July 23, 2022).

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