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Letter to the Editor

The emergence of BtSY2 Covid-like virus: A call for global preparedness



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Abstract

Scientists in China announced on 25th of November with great concern that there is a new Covid-like virus out of the five viruses of concern discovered among bats across Yunnan province. It was reported that this Covid-like virus BtSY2 has high potential of infecting humans as it comprises a receptor binding domain which is a vital part of the spike protein used to lay hold of human cells and subsequently utilize human ACE2 receptor for cell entry similar to the SARS-CoV-2. In a bid to address this global threat in affected countries, it is expedient for authorized health professionals, policy makers and the world to keep an eye on this Covid-like virus capable of spreading from bats to humans because most pandemic outbreaks in recent decades have arisen in such a manner. Strict actions should be implemented in impeding transmission to humans which is paramount to battling viral diseases as learnt from history that viral outbreaks are

very impossible to eradicate after global outbreak. Health officials and the World Health Organization should invest urgently in more research to further study this new Covid-like virus with an approach to prepare for a possible viral outbreak, and develop treatment options and possible vaccines to outsmart the danger posed to human health.

Keywords: Bat; Covid 19; Covid-like virus; Global preparedness; Pandemic

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Dear Editor,

On 25th November 2022, Scientists in Southern China announced with great concern that there is a new Covid-like virus out of the five viruses of concern discovered among bats across Yunnan province which is pathogenic and has the potential of jumping to humans causing an outbreak. This Covid-like virus known as BtSY2 is a close relative of SARS-CoV-2.¹ The research study led by a research team at Sun Yat-sen University in Shenzhen, the Yunnan Institute of Endemic Disease Control and the University of Sydney collected rectal samples from 149 bats comprising 15 species at six cities in Yunnan province, China. The researchers

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revealed a high occurrence of a single bat being infected with multiple viruses at a time from the individual RNA-nucleic acid extracted and sequenced appropriately.¹ It was reported that this Covid-like virus BtSY2 has high potential of infecting humans as it comprises a receptor binding domain, a vital part of the spike protein used to lay hold of human cells and subsequently utilize human ACE2 receptor for cell entry similar to the SARS-CoV-2.²

The discovery of this Covid-like virus has raised alarm bells among health experts and the general public alike. The need for constant monitoring and increasing surveillance to prevent potential outbreak has been prescribed for its management. This discovery illustrates the ongoing threat posed by zoonotic diseases globally. While there have been calls for improved measures to reduce the risk of spillover and contamination, this emergence highlights the importance of continued vigilance and the need for proactive measures to prevent the spread of diseases from animals to humans. The COVID-19 experience and response has also emphasized the need for coordinated global effort to prevent and control the spread of diseases like this.

The World Health Organization (WHO) advised that China should reconsider its Zero Covid policy strategy and change its measures because it is difficult to contain the spread of the Omicron variant coupled with the Covid-19 rampage in the country with daily cases in late November surpassing the peak back in April 2022. China is trying to achieve a zero Covid in areas the virus erupts in order to eliminate it. The government of China insists that their policy saves the lives of the vulnerable group at risk of infection and has helped maintain a low death toll ever since the beginning of the pandemic with authorized figure just a little over 5200 equating to three demise per million in China compared to 3000 and 4000 per million in US and UK respectively.³ This discovery calls for serious public health concerns and comes in less than a decade the world experienced three outbreaks of concern, all from animal sources. It is worthy noting that many countries have lost a guard in the control of these deadly Covid-19, Monkey-pox and Ebola outbreak which call for serious concern and the question if the world is ready and prepared to face another outbreak of disease especially that from an animal source.⁴

The Covid-19 pandemic is not fully over and there is already a Covid-like virus prowling in bats. It is expedient for the world to keep an eye on this Covid-like virus capable of spreading from bats to humans because most pandemic outbreaks in recent decades have arisen in such a manner. Strict actions should be implemented in China and globally to halt its spread especially in countries and areas where bats are common. Impeding transmission to humans is paramount to battling viral diseases as learnt from history that viral outbreaks are very impossible to eradicate after global outbreak.⁵ The importance of halting the spread of the virus cannot be overstated and it is imperative that the world take action to mitigate the potential risks posed by the threat.

In preparation for the possible outbreak, there is a need to engage in robust metrics for national-level preparedness and robust health education with an emphasis on personal and environmental sanitation especially regarding human interaction with animals.⁶ Sincere community engagement is needed to prioritize enforcement of the preventive measures relating to curbing this Covid-like virus and

avoiding crowded public gatherings in hotspots and the isolated areas will go a long way to mitigating the spread of this Covid-like virus.⁷ There is also a need to take caution of the forest animal meat human consume or interact with since the majority of the pathogens that has ravaged the human community in less than a decade are zoonotic.⁸ The painful lessons forcefully learnt during the pandemic should make country officials all over the world wise enough to avert such expensive mistakes and rather take precautionary steps to advance Global pandemic preparedness in China and all over the world.⁹

Authorized health professionals and health policy-makers should ensure *affected countries*, neighboring countries, and countries likely to harbor many bats follow the path to better pandemic preparedness laid down by researchers and adopt a robust strategy for both domestic and global pandemic preparedness. Health Officials and World Health Organization should also invest urgently in research to further study this new Covid-like virus with an approach to prepare for a possible viral outbreak, and develop treatment options and possible vaccines since pathogens have come to stay but humans must devise a strategy to outsmart the danger microbial pathogens pose to human health.

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The authors have no conflict of interest to declare.

Ethical approval

Not applicable.

Authors' contribution

POO conceived and designed the study, conducted research, provided research materials, collected data and wrote the initial draft. OOJ conceived and designed the study, conducted research, provided research materials, collected data, wrote the initial draft, and the final draft of the article. ONO conceived and designed the study, conducted research, provided research materials, collected data and wrote the initial draft. ASM conceived and designed the study, conducted research, provided research materials, collected data and wrote the initial draft. BKP conceived and designed the study, conducted research, provided research materials, collected data and wrote the initial draft. DOS conceived and designed the study, conducted research, provided research materials, collected data, wrote the initial draft, and review the final draft. EM conceived and designed the study, conducted research, provided research materials, collected data, wrote the initial draft and review the final draft. PMMV conceived and designed the study, conducted research, provided research materials, collected data, wrote the initial draft and provided logistic support. All authors have critically reviewed and approved the final draft and are

responsible for the content and similarity index of the manuscript.

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