



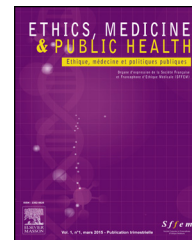
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LETTER TO THE EDITOR

Rift valley fever and COVID-19 outbreak in Kenya: A double whammy



Dear Editor,

Rift Valley Fever (RVF), a vector-borne infection caused by Phlebovirus [1], is an emerging public health concern in Kenya [2]. Rift Valley Fever virus, which is a single-stranded RNA virus, was first detected in sheep in the Rift Valley province of Kenya in 1931 [3]. Since then, frequent outbreaks of this virus has been reported in Kenya in 1998, 2006–2007, 2014, and 2018 [4]. Rift Valley Fever outbreak between the year 2006 and 2007 steered to more than 340 confirmed cases, 90 deaths, and economic losses of over US\$32 million [1]. RVF in humans varies from mild influenza-like symptoms to more complicated conditions like retinitis, viral encephalitis, hemorrhagic fever, kidney damage, jaundice, and other signs of liver dysfunction. Human transmission occurs via a bite from an infected mosquito, contact with infected blood, or body fluids. It can also be transmitted through contact with the contaminated animal placenta or blood during animal slaughter, and consumption of raw meat or contaminated milk from infected animals [5].

Studies has shown that livestock like sheep, cattle, and camels serve as significant amplifiers of the RVF virus [6]. Live attenuated vaccine against RVF for both animals and humans has recently been developed. People at high risk of getting RVF infection like herders, farmers, butchers, scientists, and animal health workers should be encouraged to receive the vaccine on priority basis [7].

Kenya provides favorable conditions for rapid multiplication of mosquito vector which has led to another outbreak of RVF in 2020. Since the RVF outbreak began in Eastern Kenya in November 2020 amidst the COVID-19 pandemic, many cases of suspected RVF have been detected in Isiolo and Mandera [8]. High numbers of human cases infected with RVF have been documented, resulting in serious healthcare challenges [5]. As reported on 4 February 2021, there were 32 confirmed human cases of RVF and 11 human deaths, with a fatality ratio of 34.4% [9]. The COVID-19 pandemic has imposed additional healthcare challenges in countries with overlapping epidemics like Kenya [10].

In March 2020, COVID-19 was declared as a global pandemic by WHO [11]. The first human case of SARS-CoV-2 infection was detected in Kenya on 12 March 2020. As reported on 8 February 2021, Kenya had 101,819 registered COVID-19 cases and 1779 human deaths [4]. Lockdowns imposed due to the COVID-19 pandemic may have led to

arbovirus outbreaks in many countries like Brazil [12], India [11], and Africa [13], as people in their homes maintained close contact with breeding sites of mosquitos. People focusing on COVID-19 forgot to adopt preventive measures for other diseases. Health system is also exhausted dealing with COVID-19 pandemic which has led to various challenges for healthcare authorities [13].

COVID-19 and Rift Valley fever may present similar clinical manifestations in the early stages resulting in a confused final diagnosis. Misdiagnosis presents as an emerging healthcare challenge leading to delay in suitable care and management of the patient [12]. COVID-19 patients require proper care and strict isolation to limit viral spread. If a patient with COVID-19 infection is misdiagnosed as having RVF, significant healthcare concerns may arise. The limited capacity of RVF differential diagnosis in health centers of Kenya has become worse during the pandemic. There is also a low suspicion index among healthcare workers of Kenya for RVF which can affect disease prognosis. Delayed detection of the virus could be associated with the low opportunities for early diagnosis and management [1]. COVID-19 pandemic also resulted in a lack of supplies required to limit RVF spread in Kenya. Furthermore, the prioritization of COVID-19 patients by healthcare professionals and laboratories in Kenya has also blunted the response to the RVF outbreak [4].

Probable methods to control and prevent RVF outbreaks in Kenya are serosurveys and vaccination of the infected animals [14]. Routine vaccination in animals should be encouraged to prevent human infections [5]. However, mass vaccination programs against RVF infection are also a challenge amidst COVID-19 vaccination drives when herd immunity has yet to be achieved globally. Lack of adequate knowledge on cost-effectiveness and availability of RVF vaccines suggests further studies on these issues [14].

WHO has advised certain recommendations to prevent RVF outbreaks in Kenya. Contact with infected animals should be avoided. Proper health education and promotion should be carried out in the affected region. The use of local language should be employed in creating awareness on RVF. Proper WASH facilities should be mounted in animal farms to encourage hand washing and hygiene especially by people involved in livestock management. Gloves should be used to control animal-to-human transmission. Consumption of infected raw meat and contaminated milk should be avoided. Mosquito bites can be avoided by using protective measures like mosquito nets and personal insect repellent. Healthcare professionals should be properly trained to effectively manage RVF patients.

Human and animal rights

The authors declare that the work described has not involved experimentation on humans or animals.

Informed consent and patient details

The authors declare that the work described does not involve patients or volunteers.

Funding

None.

Author contributions

All authors attest that they meet the current *International Committee of Medical Journal Editors (ICMJE)* criteria for Authorship. Individual author contributions are as follows: M.I and I.U conceived the idea, Q.M, M.I and I.U retrieved the data, did write up of letter and finally I.O.O and F.J reviewed and provided inputs. All authors approved the final version of manuscript.

Disclosure of interest

The author declares that he has no competing interest.

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Received 27 May 2021;

accepted 3 June 2021

Available online 9 June 2021

<https://doi.org/10.1016/j.jemep.2021.100685>

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