

ABSTRACTS

EMERGING INFECTIONS

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Emerging infections are defined as newly appeared infections in a population or infections have existed but are rapidly increasing in incidence or geographic range. They are caused by various factors, including zoonotic diseases, climate change, and global travel but these are mainly due to viral infections. For example, SARS-CoV-2, the virus responsible for the COVID-19 pandemic, is believed to have originated in bats and was transmitted to humans through an intermediate animal host. Similarly, Zika virus, which caused an outbreak in Brazil in 2015, is spread by *Aedes* mosquitoes and has been linked to increased global travel. A public health emergency of international concern (PHEIC) is a formal declaration by the World Health Organization (WHO) which is an extraordinary event to constitute a public health risk to other States through the international spread of a serious, sudden, unusual or unexpected disease and it potentially require a coordinated international response” to combat spread beyond the affected state’s national border” and “may require immediate international action”. SEVEN infections were declared PHEIC – in this millennium and these are: SARS – 2004, H1N1 influenza pandemic - 2009, Ebola (West African outbreak - 2013-20and outbreak in Democratic Republic of Congo 2018-2020, Poliomyelitis - 2014, Zika –2016, COVID-19 -2020 – 22, Monkey Pox - July, 2022. Ebola Virus Disease (EVD) is a rarely and deadly disease, common in sub-Saharan Africa, very much infectious, can manifest as Ebola hemorrhagic fever. Four variants and case fatality rates range from 25 to 90 percent. Fever, headache, bodyache, muscle pain, pain abdomen with GI symptoms are common clinical features. Rapid antigen detection tests by semi-automated nucleic acid tests help in diagnosis. Management is mainly supportive. In 2020, USA FDA approved the use of INMAZEB & EBANGA, monoclonal antibodies for Zaire ebolavirus. Corona virus or Covid 19 virus, medium sized, enveloping a positive – stranded RNA virus commonly affects respiratory and gastro-intestinal tract resulting much mortalities and morbidities in human populations. Though vaccinations are helpful to combat the disease but mutations may result a human epidemic. Monkey pox virus is a DS DNA virus, zoonotic mild disease and fatality rate of around 3-6%. Cases are found in India mainly in Kerala and Delhi. Three stages of monkey pox are febrile, rash and recovery stages and diagnosis by RT-PCR from lesions and body fluids. ZIKA virus-SS RNA virus discovered in Uganda, transmission by mosquito bite and other modes vertical and sexual. Most cases are asymptomatic but may present as fever, maculopapular rash, arthralgia, conjunctivitis and etc. Congenital Zika Syndrome results decreased brain growth. Diagnosis is usually done by serology – Zika IgM antibody. Treatment is supportive. In conclusion, five out of seven PHEIC of this Millennium occurred in last decade all are zoonotic in nature. Monkey Pox, Ebola, Zika along with COVID 19 is important PHEIC of viral diseases of last decade. Ebola are most notorious for high mortality. Zika - we are highly concerned for its mother to child transmission with a consequence of 15-20% incidence of microcephaly.

Keywords: Emerging infections, public health emergency of international concern, zoonotic diseases

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