

**INFECTIOUS DISEASES - II**
**EMERGING INFECTIOUS DISEASES**

**\*Raju C Shah**  
**\*\*Meet Patel**

**Abstract:** *Emerging infectious diseases are infections that have recently appeared within a population or those whose incidence or geographic range is rapidly increasing or threatens to increase in the near future. People coming in to closer contact with wild animals and travelling much more frequently are major contributors. Many emerging diseases arise when infectious agents in animals are passed to humans.*

*The second annual review in WHO by expert committee consider that given their potential to cause a public health emergency and the absence of efficacious drugs and/or vaccines, there is an urgent need for accelerated research and development for 8 diseases emerged recently. In this article we will discuss about four emerging diseases which include Ebola virus, Middle East Respiratory Syndrome Corona Virus (MERS-CoV), Nipah and Zika virus.*

**Keywords:** *Emerging Infectious diseases, Zoonoses, Contagious, Ebola, MERS, Nipah, Zika.*

**Points to Remember**

- *Many emerging diseases arise when infectious agents in animals are passed to humans (referred to as zoonoses).*
- *Ebola viruses are highly contagious. The infected patient sheds infectious viruses in all body secretions. The main way to prevent is to avoid travel to areas where it is endemic.*
- *MERS - initially, the illness resembles influenza often progresses to dyspnea, hypoxia and RDS.*
- *Nipah virus infects a wide range of animals, causes severe disease and death in people.*
- *Zika virus infects human embryonic cortical neural progenitor cells, inducing cell death and providing evidence that human neurons are susceptible to the virus.*

**References**

1. World Health Organization, Regional Office for South-East Asia. Combating emerging infectious diseases in the South-East Asia Region. New Delhi: WHO-SEARO, 2005.
2. Morens DM, Fauci AS (2013) Emerging Infectious Diseases: Threats to Human Health and Global Stability. PLoS Pathog 9(7): e1003467. <https://doi.org/10.1371/journal.ppat.1003467>
3. Emerging Infectious Diseases. [https://www.bcm.edu/Emerging Infections and Biodefense](https://www.bcm.edu/Emerging%20Infections%20and%20Biodefense). Accessed on 4<sup>th</sup> July, 2019.
4. 2018 Annual review of diseases prioritized under the Research and Development Blueprint Informal consultation. [http://www.who.int/csr/research-and-development/documents/prioritizing\\_diseases\\_progress/en/](http://www.who.int/csr/research-and-development/documents/prioritizing_diseases_progress/en/). Accessed on 4<sup>th</sup> July, 2019.
5. What is ebola virus disease –History of ebola virus disease in humans-CDC. <https://www.cdc.gov/vhf/ebola/about.html>. Accessed on 17th June, 2019.
6. Davis PK, Ebola Hemorrhagic Fever (Ebola Virus Disease), Medicine net. Jerry R (Medical Editor) Balentine. [https://www.medicinenet.com/ebola\\_hemorrhagic\\_fever\\_ebola\\_hf/article.htm](https://www.medicinenet.com/ebola_hemorrhagic_fever_ebola_hf/article.htm). Accessed on 19th June, 2019.
7. <https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease>. Accessed on 19th June, 2019.

---

\* Medical Director,  
Ankur Institute of Child Health

\*\* Associate Consulting Pediatrician,  
Ankur Institute of Child Health, Ahmedabad.  
email: rajucshah@gmail.com

8. <https://www.webmd.com/a-to-z-guides/ebola-fever-virus-infection> Article on –what is ebola virus disease-Prevention,Vaccine,Treatment. Accessed on 21<sup>st</sup> June, 2019.
9. Henao-Restrepo AM, Camacho A, Longini IM, Watson CH, Edmunds WJ, Egger M, et al. Efficacy and effectiveness of an rVSV-vectored vaccine in preventing Ebola virus disease: final results from the Guinea ring vaccination, open label, cluster-randomised trial (Ebola Ca Suffit!). *The Lancet*. 2017;389:505-518.
10. <http://apps.who.int/mediacentre/factsheets/mers-cov/en/index.html> Middle East respiratory syndrome coronavirus (MERS-CoV).
11. <https://www.who.int/features/qa/mers-cov/en/>. Middle East respiratory syndrome coronavirus (MERS-CoV). Accessed on 21<sup>st</sup> June, 2019.
12. <https://www.cdc.gov/coronavirus/mers/index.html>-Middle East Respiratory Syndrome (MERS). Accessed on 21<sup>st</sup> June, 2019.
13. [http://www.searo.who.int/entity/emerging\\_diseases/links/CDS\\_Nipah\\_Virus.pdf?ua=1](http://www.searo.who.int/entity/emerging_diseases/links/CDS_Nipah_Virus.pdf?ua=1)-Nipah Virus Infection. Accessed on 21<sup>st</sup> June, 2019. <https://doi.org/10.1128/JCM.01875-17>.
14. Ang BSP, Lim TCC, Wang L. 2018. Nipah virus infection. *J Clin Microbiol* 56:e01875-17.
15. <https://gvn.org/update-on-the-nipah-virus-outbreak-in-kerala-india/-UPDATE-ON-THE-NIPAH-VIRUS-OUTBREAK-IN-KERALA,INDIA>. Accessed on 21<sup>st</sup> June, 2019.
16. <https://www.who.int/news-room/fact-sheets/detail/nipah-virus-World-Health-Organisation-Nipah-virus>. Accessed on 21<sup>st</sup> June, 2019.
17. <https://www.cdc.gov/vhf/nipah/pdf/factsheet.pdf>. National Center for Emerging and Zoonotic Infectious Diseases. Division of High-Consequence Pathogens and Pathology (DHCPP)- Nipah Virus (NiV). Accessed on 21<sup>st</sup> June, 2019.
18. <http://www.searo.who.int/india/topics/emergencies/ministry-of-health-and-family-welfare-press-release-2-june-2018.pdf>-Ministry of Health and Family Welfare-public health measures for Nipah Virus disease. Accessed on 21<sup>st</sup> June, 2019.
19. <http://kkaggarwal.com/Editorial/west-nile-virus-another-impending-outbreak-in-india/>-West Nile virus: Another impending outbreak in India?- Accessed on 21<sup>st</sup> June, 2019.
20. Baud D, Gubler DJ, Schaub B, Lanteri MC, Musso D. An update on Zika virus infection. *Lancet* 2017; 390: 2099–2109 Published Online 21<sup>st</sup> June, 2017.
21. <https://www.who.int/news-room/fact-sheets/detail/zika-virus>. Accessed on 15<sup>th</sup> March, 2019.
22. [www.cdc.gov/zika/CS289371-C/](http://www.cdc.gov/zika/CS289371-C/) August 21, 2018. Accessed on 21<sup>st</sup> June, 2019.
23. [https://rare diseases.info.nih.gov/diseases/12894/zika-virus-infection-National-center-for-advancing-translational-sciences-Genetic-and-rare-disease-information-centre-\(GARD\)-Zika-virus-infection](https://rare diseases.info.nih.gov/diseases/12894/zika-virus-infection-National-center-for-advancing-translational-sciences-Genetic-and-rare-disease-information-centre-(GARD)-Zika-virus-infection). Accessed on 21<sup>st</sup> June, 2019.