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*North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, India***Emerging viral diseases in India with particular reference to the north eastern region**

Emerging infectious diseases is a major health threat to the mankind. The globe has been observing detection of one new infectious agent in average in every year during last 30 years. Several outbreaks due to 8 new aetiological agents in recent past are reported in India. Majority of them (62.5%) are viral agents like H1N1, Chikungunya, Chandipura, CCHF virus and Nipah virus on top of JEV, Dengue viruses, HBV, HCV, HEV including HIV.

Northeast India is the north eastern region of the country comprising of eight states with 4500km of international boundary with China, Myanmar, Bangladesh and Bhutan with more than 40 million population and 220 diverse ethnic groups. The region has unique climatic condition with hilly terrains flanking huge valleys with inhabitants of mosaic socio-economic and cultural backgrounds.

Northeast India is bearing a considerable burden of viral infections occurring as emerging or re-emerging diseases. The region has the worse experience of devastating epidemics of JE since 1978, with huge morbidity and mortality till today spreading to new geographical areas. Recent activities of Dengue and Chikungunya viruses in the region is emerging as a great concern to the public health authority. HIV with increasing HBV and HCV infections, containment of H1N1 and H5N1 diseases and epidemic prediction including preparedness for CCHF and current Nipah virus infections are becoming a great challenge to the health administrators of the region. In consideration of successful implementation of prevention and control strategies for such infections a diagnostic laboratory and surveillance based study was conducted to investigate the prevalence of different emerging viral infections in the Northeast India in North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong during the period 2015-2018. The relevant Arbo viruses, Hepatitis viruses, Rota viruses and

Influenza viruses including CCHF virus were included in the study. Data was analyzed using R-statistical package v3.4.4 and MedCalc v18.

A total of 1795 patients were investigated for various viral infections in the study. The male:female ratio of the total patients investigated was 1.34, with male preponderance. The mean age of the patients was 31.01 (± 17.23). Among the patients investigated, 82.34% were from the state of Meghalaya and rest 17.66% were from the neighbouring States of the region. The prevalence of various viral agents associated with the patients was found to be as: Dengue (15.25%, n= 669), Japanese encephalitis (22.1%, n= 353), Chikungunya (14.83%, n = 573), Hepatitis viruses (25.11%, n=238), Crimean Congo Hemorrhagic Fever virus (0%, n = 35), Rota viruses (60.61%, n = 33), Influenza viruses (0.56%, n = 1080). The seasonal variation of different viral infections was also analyzed. The demographic profile of individual viral infection was analyzed.

Conclusion: The study highlights the burden of different emerging viral infections in this region of the country. Strengthening of surveillance and timely reporting systems, epidemic prediction and preparedness, rapid response and a revamped health infrastructure are the best weapons to fight against such threat to human being.

Speaker Biography

Anil Chandra Phukan completed MD (Medical Microbiology) from Dibrugarh University, Assam and DMV from Pune University, India and obtained DSA from COTTISA, Bangkok, Thailand under WHO Fellowship. He worked as senior scientist in Indian Council of Medical Research for a long time. Presently, he has been working as dean of academics and prof. & head of Microbiology Department, NEIGRIHMS, Shillong, India with active involvement in implementation of national health programmes. He has several national and international publications in reputed journals. Understanding of molecular epidemiology of infectious diseases is his priority area of research activity.

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