WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health, Nutrition & Indigenous Medicine

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WER SRI LANKA 2018

Vol. 45 No. 13 **24th– 30th March 2018**

Nipah virus

While Asia is an important epicentre for Emerging Infectious Disease (EID), e.g.: Nipah, SARS and Avian Influenza there have been more than 30 reported new outbreaks in the last 20 years. Therefore, the global programme on Emerging Infectious Disease (EID) was established by WHO and CDC in the early 1990s. Factors that contribute to emergence of Increase Infectious Disease are international travel across the countries in a limited time, changes in the environment, changes in human and animal demography, changes of pathogens and changes in food processing and handling, including foods prepared from many different individual animals and transported over great distances are a few of them. Social and cultural factors such as food habits and religious beliefs play a role too.

Nipah virus infection causes severe disease in humans as well as in animals. Even though it is a newly emerging zoonosis: transmits the disease from animals to humans, also can transmit from contaminated food or directly between people. Human-to-human transmission has also been documented, including in a hospital setting in India.

The natural host of the virus is fruit bats of the Pteropodidae.

Nipah virus was first identified in Nipah, Malaysia in 1999 during an outbreak of encephalitis and respiratory illness among pig farmers and people with close contact with pigs in Malaysia and Singapore. Nipah virus caused a relatively mild disease in pigs, but nearly 300 human cases with over 100 deaths were reported. In order to stop the outbreak, more than a million pigs were euthanized, causing tremendous trade loss for Malaysia. Strict quarantine and hospital control measures effectively controlled the spread and no new outbreaks have been reported in Malaysia since then.

In 2004, patients from Bangladesh became infected with Nipah virus due to consumption of date palm sap that had been contaminated by infected fruit bats. Since then nearly annual outbreaks have occurred in Bangladesh. However, there were no identified intermediate hosts, in subsequent outbreaks.

The most recent outbreak of Nipah virus was reported from India on 19 May 2018, from Kozhikode district of Kerala. This was the first Nipah virus outbreak in South India. Countries like Cambodia, Ghana, Indonesia, Madagascar, the Philippines, and Thailand are also at risk for the infection because Pteropus bat species have been found.

Transmission

In Bangladesh and India person-to-person transmission of Nipah virus is often reported. This can happen most commonly in the family and caregivers of Nipah virus-infected patients. Transmission of Nipah virus also occurs from direct exposure to infected bats

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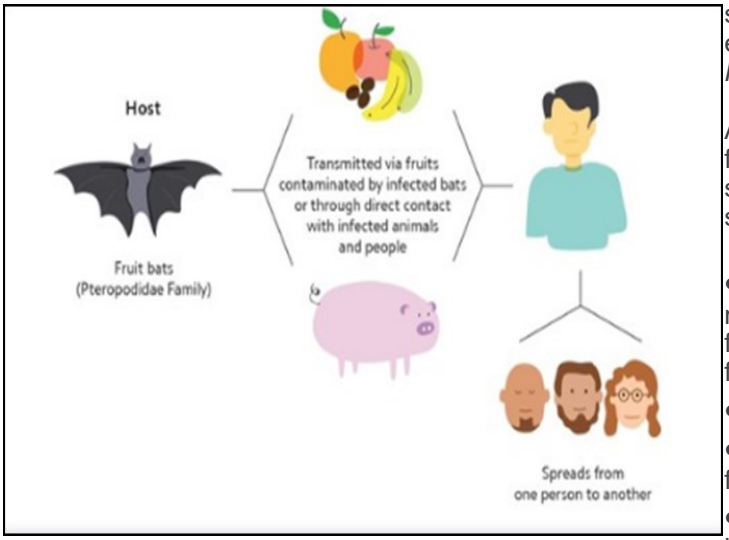

Signs and symptoms

The infection with Nipah virus is mainly associated with encephalitis. The incubation period is 5 to 14 days. The infection begins with fever, headache, myalgia, sore throat, dizziness and vomiting. Some present with drowsiness, disorientation and mental confusion. Some patients show respiratory illness during the early part of their infections, some patients show severe neurological and pulmonary signs.

During the 1999 outbreak of Nipah virus disease nearly 40% of the patients who entered hospitals with the serious nervous disease died from the illness. Persistent convulsions and personality changes are known long-term sequel following Nipah virus infection and even latent infections with subsequent reactivation of Nipah virus and death have also been reported after months and even after years of exposure.

Nipah virus is diagnosed with a combination of tests such as:

- Throat and nasal swabs which are sent to the laboratory for testing
- Blood test
- Virus isolation and detection
- Cerebrospinal Fluid analysis
  Urine test

Treatment and control

Currently, there is no known treatment for Nipah virus disease. Treatment is mainly the supportive care but some patients may need intensive supportive care. Ribavirin has shown to be effective against the disease even though the clinical usefulness of Ribavirin remains uncertain. Nipah virus encephalitis can be transmitted person-to-person, standard infection control practices and proper barrier nursing techniques should be used to prevent nosocomial transmission. Samples taken from people and animals with suspected Nipah virus infection should be handled by trained staff working in suitably equipped laboratories.

How can Nipah virus infection be prevented?

As there is no vaccine or treatment currently available for the Nipah virus, prevention is the key to stop the spread and remain safe from this virus. Following are some important preventive measures:

- Since fruits bats are the primary cause of Nipah virus infection, people who have domestic animals or have farm animals should prevent the animals from eating fruits contaminated by bats.
- Avoid consumption of contaminated fruits and toddy.
- Physical barriers can be used to prevent fruit bats from accessing and contaminating fruits and toddy.
- Pig owners should pay attention to prevent contact between fruit bats and pigs if pigs are raised in open pig sheds.
- Caretakers need to be able to identify symptoms of infections in animals immediately so that the infected among them can be isolated in order to prevent an outbreak.
- Avoiding any form of direct contact with infected pigs, bats and humans are imperative to prevent infection.
- Health care workers such as nurses and doctors attending to infected patients must take universal precautionary measures, such as wearing gloves, using gowns, wearing caps, wearing masks and washing hands.
- Hospital staff needs to take care of necessary sanitation procedures to prevent nosocomial infections.
- Avoid climbing trees which are suspected to have bat secretions such as saliva or droppings.
- Avoid close contact with sick people. While sick, contact with others should be limited so the infection does not spread. Cover your nose and mouth with a tissue when you cough or sneeze and throw the tissue away later.
- Clean your hands often with soap and water. If soap and water are not available, use an alcohol-based hand sanitizer that contains at least 60 per cent alcohol.

  Prevent fruit bats from nesting near your house and surroundings.

We need to be prepared by reducing exposures, strengthening the early warning system, intensifying rapid response system, building capacity to cope up with disease problem and coordinating scientific research and development.

References:

www.who.int/csr/disease/nipah/en/
https://www.cdc.gov/vhf/nipah/index.html
https://www.thenewsminute.com › Kerala

Compiled by Dr A.M.U.Prabha Kumari of the Epidemiology Unit.

Table 1: Selected notifiable diseases reported by Medical Officers of Health 17th – 23rd Mar 2018 (12th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmania-sis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	100	2199	2	19	0	3	1	15	0	5	4	44	0	3	0	2	0	0	25	196	2	17	0	1	**60**	**100**
Gampaha	44	1325	3	13	0	3	0	8	2	9	14	71	1	2	1	3	0	0	21	221	0	11	0	2	**73**	**100**
Kalutara	73	1024	2	18	0	2	0	1	15	31	15	104	0	2	0	4	0	0	18	166	1	23	0	1	**56**	**100**
Kandy	30	881	2	18	0	4	0	1	0	2	0	12	2	30	0	5	0	0	16	92	0	7	1	6	**58**	**100**
Matale	14	269	0	3	0	1	0	0	2	10	1	13	0	1	0	3	0	0	3	11	0	3	2	29	**59**	**100**
NuwaraEliya	2	48	0	4	0	1	0	5	0	2	0	5	1	41	1	8	0	0	8	84	0	10	0	0	**21**	**100**
Galle	7	223	1	8	0	5	0	0	0	1	7	71	0	9	0	0	0	1	1	41	1	13	0	2	**23**	**63**
Hambantota	15	346	1	4	0	0	0	1	4	4	3	12	1	20	0	0	0	0	12	81	0	2	25	158	**70**	**100**
Matara	19	338	1	11	0	3	1	3	0	14	3	50	0	10	0	2	0	0	10	95	0	3	19	108	**55**	**100**
Jaffna	47	1129	1	40	0	0	2	17	0	174	0	4	5	188	0	0	0	0	13	98	0	5	0	0	**30**	**93**
Kilinochchi	4	93	0	6	0	1	0	8	0	0	0	1	1	3	0	0	0	1	0	18	0	0	0	0	**42**	**100**
Mannar	1	20	0	9	0	0	0	2	0	2	0	1	0	0	0	0	0	0	2	12	0	1	0	0	**33**	**100**
Vavuniya	10	159	0	2	0	3	1	18	0	7	0	12	0	6	0	0	0	1	2	12	0	1	0	0	**54**	**100**
Mullaitivu	3	24	0	2	0	0	1	5	0	9	1	5	0	2	0	0	0	0	1	2	0	0	0	1	**15**	**83**
Batticaloa	104	1527	3	53	0	4	1	1	2	9	1	9	0	1	0	1	0	1	8	41	0	7	0	0	**61**	**100**
Ampara	8	52	0	12	0	0	0	1	0	1	0	16	0	0	0	3	0	0	3	61	0	4	0	1	**65**	**100**
Trincomalee	9	234	0	15	0	0	1	2	0	7	3	14	0	9	0	1	0	0	6	72	0	1	0	6	**32**	**100**
Kurunegala	38	977	1	36	1	3	0	4	0	2	0	34	0	6	0	3	0	1	12	150	5	27	9	58	**68**	**100**
Puttalam	31	919	0	13	1	4	0	3	1	4	0	10	2	6	1	1	0	0	5	43	5	25	0	0	**74**	**100**
Anuradhapura	11	285	0	13	1	2	0	1	5	6	0	45	0	11	1	2	0	0	14	115	0	5	5	97	**43**	**100**
Polonnaruwa	5	79	0	9	0	1	0	0	0	6	3	46	0	0	0	1	0	0	8	56	0	4	7	49	**69**	**93**
Badulla	10	138	3	37	1	1	0	5	0	5	2	38	2	19	0	8	0	0	12	192	1	27	0	2	**50**	**100**
Monaragala	10	381	3	31	0	2	0	1	0	2	6	90	2	43	1	5	0	0	3	47	0	6	3	12	**55**	**100**
Ratnapura	37	511	3	48	1	19	1	6	0	2	9	85	0	13	1	5	0	1	5	91	1	34	0	89	**39**	**100**
Kegalle	21	384	1	18	0	4	0	2	6	50	5	31	3	26	0	6	0	0	9	104	2	13	1	1	**67**	**100**
Kalmune	36	926	1	15	0	0	0	1	0	13	0	1	0	0	0	1	0	0	0	43	0	3	0	1	**45**	**100**
SRILANKA	**689**	**14491**	**28**	**457**	**5**	**66**	**9**	**111**	**37**	**377**	**77**	**824**	**20**	**451**	**6**	**64**	**0**	**6**	**217**	**2144**	**18**	**252**	**72**	**624**	**53**	**97**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 23rd March , 2018 Total number of reporting units 339 Number of reporting units data provided for the current week: 330 C**-Completeness

A = Cases reported during the current week. **B** = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

17th - 23rd Mar 2018 (12th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2018	Number of cases during same week in 2017	Total number of cases to date in 2018	Total number of cases to date in 2017	Difference between the number of cases to date in 2018 & 2017
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	11	25	- 56 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	03	01	02	02	02	01	04	02	00	17	05	85	83	2.4 %
Measles	01	00	00	01	01	03	00	00	00	06	02	29	92	- 68.5 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	04	05	- 20 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	06	06	0 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	01	12	21	- 42.8%
Whooping Cough	00	00	02	00	00	00	00	00	00	02	00	09	04	125 %
Tuberculosis	28	39	22	02	15	12	02	04	09	133	123	1761	1573	11.9 %

Key to Table 1 & 2

Provinces: **W**: Western, **C**: Central, **S**: Southern, **N**: North, **E**: East, **NC**: North Central, **NW**: North Western, **U**: Uva, **Sab**: Sabaragamuwa.

RDHS Divisions: **CB**: Colombo, **GM**: Gampaha, **KL**: Kalutara, **KD**: Kandy, **ML**: Matale, **NE**: Nuwara Eliya, **GL**: Galle, **HB**: Hambantota, **MT**: Matara, **JF**: Jaffna, **KN**: Killinochchi, **MN**: Mannar, **VA**: Vavuniya, **MU**: Mullaitivu, **BT**: Batticaloa, **AM**: Ampara, **TR**: Trincomalee, **KM**: Kalmunai, **KR**: Kurunegala, **PU**: Puttalam, **AP**: Anuradhapura, **PO**: Polonnaruwa, **BD**: Badulla, **MO**: Moneragala, **RP**: Ratnapura, **KG**: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS =**Congenital Rubella Syndrome

NA = Not Available

Number of Malaria Cases Up to End of March 2018,

02

All are Imported!!!

PRINTING OF THIS PUBLICATION IS FUNDED BY THE WORLD HEALTH ORGANIZATION (WHO).

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to **chepid@sltnet.lk. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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