Press Release Regarding Fever Cases at Pali, Thane, Sattari- Goa

Cases of Fever are being reported from Pali - Thane, Sattari, since last week of February. All the patients have received necessary treatment and few were being referred to higher centers as and when required. However four of these patients who were suffering from other co-morbid conditions succumbed to death in Goa Medical College.

Although this department had done Field investigation by sending Rapid Response Teams twice, and also tested these cases for various illnesses like Hepatitis A & E, Dengue, Chikungunya, Malaria, Typhoid Fever, Leptospirosis, Swine Flu; till date no specific cause had been identified. Appropriate water samples that were tested for biological & chemical analysis also did not show any significant results. Thus the issue was discussed with National Centre for Disease Control (NCDC), Delhi and Manipal Centre for Viral Research (MCVR), Manipal following which a team from MCVR, Manipal visited Pali village under the guidance of Dr. Arun Kumar (Professor and Head, MCVR, Manipal University) and Dr. Utkarsh Betodkar (State Surveillance Officer, Directorate of Health Services, Campal) along with the Health officer and field staff of Community Health Centre Valpoi. Detailed investigations were carried out and serum samples of 20 patients were collected for testing at MCVR, Manipal. Out of these 20, 18 samples tested positive (which even included sample of one expired patient) for Kyasanur Forest Disease Virus (KFDV).

Following the confirmation of the etiology of fever outbreak at Pali, Thane as KFD, this department has already informed the same to the department of Animal Husbandry & Veterinary Services and Forest Department so that necessary tick control measures are taken. Also Health Officer, CHC Valpoi is been informed to conduct awareness activities in the locality.

Further Team from National Centre for Disease Control (NCDC), Delhi will be visiting the state to carry out detailed investigation of the outbreak and also give expertise in prevention and control measures in the affected area.
**Kyasanur Forest Disease (KFD)**

Kyasanur Forest disease (KFD) is caused by Kyasanur Forest disease virus (KFDV). KFDV was identified in 1957 when it was isolated from a sick monkey from the Kyasanur Forest in Karnataka (formerly Mysore) State, India. Since then, between 400-500 humans cases per year have been reported. Hard ticks (*Hemaphysalis spinigera*) are the reservoir of KFD virus and once infected, remain so for life. Rodents, shrews, and monkeys are common hosts for KFDV after being bitten by an infected tick. KFDV can cause epizootics with high fatality in primates.

**Transmission**

Transmission to humans may occur after a tick bite or contact with an infected animal, most importantly a sick or recently dead monkey. No person-to-person transmission has been described.

Large animals such as goats, cows, and sheep may become infected with KFD but play a limited role in the transmission of the disease. These animals provide the blood meals for ticks and it is possible for infected animals with viremia to infect other ticks, but transmission of KFDV to humans from these larger animals is extremely rare. Furthermore, there is no evidence of disease transmission via the unpasteurized milk of any of these animals.

**Signs and Symptoms**

After an incubation period of 3-8 days, the symptoms of KFD begin suddenly with chills, fever, and headache. Severe muscle pain with vomiting, gastrointestinal symptoms and bleeding problems may occur 3-4 days after initial symptom onset. Patients may experience abnormally low blood pressure, and low platelet, red blood cell, and white blood cell counts.

After 1-2 weeks of symptoms, some patients recover without complication. However, the illness is biphasic for a subset of patients (10-20%) who experience a second wave of symptoms at the beginning of the third week. These symptoms include fever and signs of neurological manifestations, such as severe headache, mental disturbances, tremors, and vision deficits.

The estimated case-fatality rate is from 3 to 5% for KFD.
Risk of Exposure

KFD has historically been limited to the western and central districts of Karnataka State, India. However, in November 2012, samples from humans and monkeys tested positive for KFDV in the southernmost district of the State which neighbours Tamil Nadu State and Kerala State, indicating the possibility of wider distribution of KFDV. People with recreational or occupational exposure to rural or outdoor settings (e.g., hunters, herders, forest workers, farmers) are potentially at risk for infection by contact with infected ticks. Seasonality is another important risk factor as more cases are reported during the dry season, from November through June.

Diagnosis

Diagnosis can be made in the early stage of illness by molecular detection by PCR or virus isolation from blood. Later, serologic testing using enzyme-linked immunosorbent serologic assay (ELISA) can be performed.

Treatment

There is no specific treatment for KFD, but early hospitalization and supportive therapy is important. Supportive therapy includes the maintenance of hydration and the usual precautions for patients with bleeding disorders.

Prevention

A vaccine does exist for KFD and is used in endemic areas of India. Additional preventative measures include insect repellents and wearing protective clothing in areas where ticks are endemic.