

# ***KYASANUR FOREST DISEASE (KFD)***

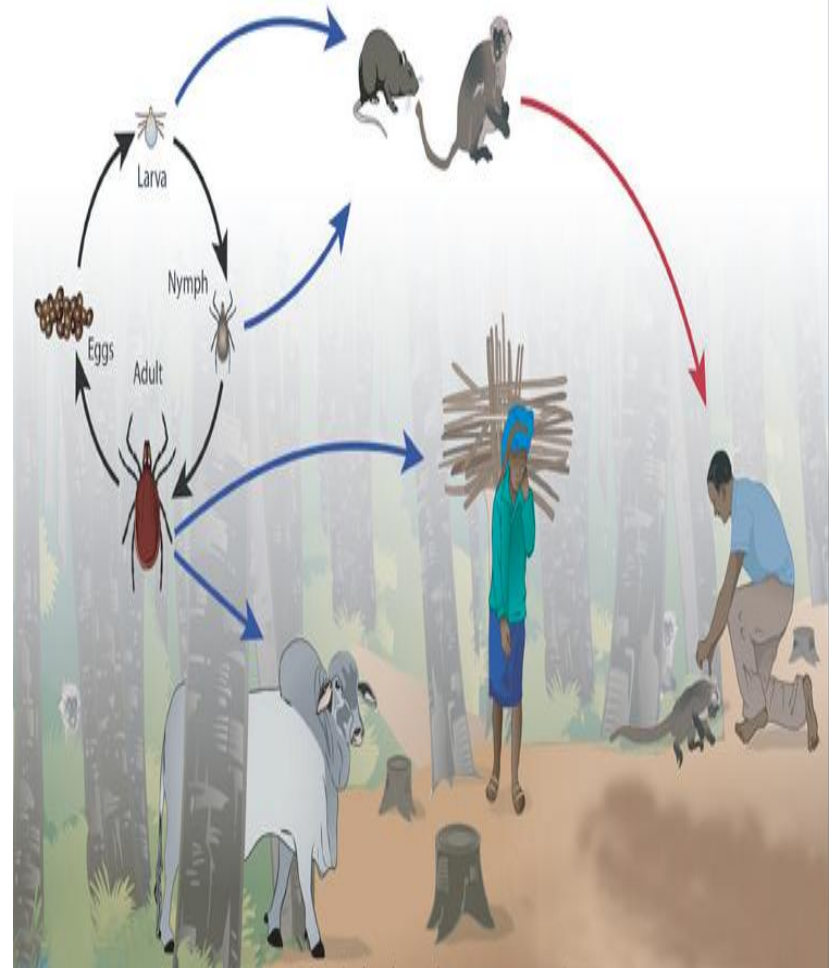
**Public Health Division, Directorate of Health  
Services**

**Thiruvananthapuram**

**June 2016**

# Epidemiology

- **Agent**
- B group Arbovirus (RNA virus belong to the genus Flavivirus that is antigenically related to Langkat, DHF& WestNile Virus)
- **VECTOR**
- Transmitted by Haemophysalis ticks (common species spinigera)
- **INCUBATION PERIOD**
- 3-8 days after exposure to infective tick bite.



# SYMPTOMATOLOGY

- Fever, chills, headache, joint pains, myalgia and vomiting are the initial symptoms.
- Diarrhoea may be present in some cases.
- Sore throat and bleeding manifestations may be seen after 2-3 days.
- Severe prostration is a constant accompaniment.
- Altered sensorium, headache out of proportion to fever, with or without seizures.
- **Bleeding manifestations indicate grave prognosis**

# CLINICAL FINDINGS

- **Conjunctiva suffusion**
- **Low blood pressure**, readily improving with IV fluids.
- **Oral ulcers and papulo-vesicular lesions** over the palate may be seen.
- Bleeding manifestations like **petechial skin haemorrhages and epistaxis** may be seen.

# COMPLICATIONS

## FROM THE SECOND WEEK ONWARDS

- Neurological manifestations-severe headache, neck stiffness, altered sensorium, seizures, and focal neurologic deficits including vision deficits may be seen.
- Death can also happen if not attended properly.
- Haemorrhagic complications may occur.
- Hepatic dysfunction, renal failure, Myocarditis, Pneumonitis & pancreatitis can also occur.

# WARNING SIGNS FOR REFERRAL

- **Neurological Signs**
- Drop in GCS score, headache disproportionate to fever, focal neurological deficits, neck stiffness, seizures
- **Circulatory**
- Hypotension
- **Deterioration of respiratory function**
- Rising respiratory rate, chest signs, falling SPO2

# INVESTIGATIONS

- **BLOOD ROUTINE EXAMINATION**
- Leukopenia less than 4000/cu mm with relative lymphocytosis, mild thrombocytopenia
- **BIO CHEMISTRY TESTS**
- Liver Function Test shows varying degrees of abnormalities
- Renal function Test- Abnormalities may be seen.
- Repeated if necessary
- PT/INR, APTT if indicated.
- HB Electrophoresis for those of Tribal/Ethnic Communities.

**SPECIAL DIAGNOSTIC TEST FOR CONFIRMATION (for epidemiological purposes) by**  
Molecular detection by **RT-PCR** or virus isolation from blood in the early stage of illness (within 5 days of onset)  
After 5 days, **IgM ELISA** for antibody detection.

**TESTS FOR DETECTING COMPLICATIONS**  
ECG to rule out myocarditis ( Tachycardia, diffuse ST, T wave changes are suggestive of myocarditis)  
X ray chest to rule out Pneumonitis.  
EEG& MRI- to diagnose encephalitis.

# POPULATION AT RISK

- Individuals with fever and associated symptoms hailing from villages previously affected with KFD.
- Individuals with fever and associated symptoms hailing from an area of within 5 Km of monkey death
- Human cases/death due to suspected/confirmed KFD and Tick positives for KFD virus.
- Individuals frequently visiting forests- Forests & Wildlife Department personnel, those involved in fire line work, firewood gathering, cattle grazing etc and presenting with fever and associated symptoms

**ALL SUSPECTED AND EPIDEMIOLOGICALLY LINKED CASES MUST BE ADMITTED TO MAJOR HOSPITALS**



# TREATMENT

- Adequate rest and hydration.
- If necessary, IV Fluids
- Paracetamol- if not contraindicated otherwise
- No NSAIDs.
- Antibiotics may be started, considering differential diagnosis, secondary infection etc
- Broad spectrum antibiotics to be given in patients presenting with neutropenia.

# MONITORING

- Temperature, Pulse, Blood Pressure, SpO2 to be monitored **4 Hourly & SOS**
- **GLASGOW COMA SCALE SCORE- 12 hourly or more frequently as and when required.**
- Fluid intake /output chart.

# REFERRAL

**Before referring the patient start the following**

- **If nervous system related complications (Encephalitis)**
  - Inj. Dexamethasone 8mg I.V. stat, 4 mg IV 8 hrly
  - Inj. Mannitol 100 ml I.V. 8 hrly
  - Anticonvulsant
  - Inj. Levetricetam- 40-60 mg / Kg body weight IV.  
(Inj. Phenytoin is to be avoided)
- **If Hypotension**
  - Fluid replenishment, inotropes may be attempted with necessary precautions


# REFERRAL...

- **In case of referral, inform the higher centres in advance about the case.**
- **Basic life support systems should be given during transit to higher centres.**

## **FOLLOW UP**

The discharged patients must be followed up for 3-4 weeks for development of second phase of illness/ complications.

# Contacts and Clarifications

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- For all queries about phone numbers, email etc of concerned officials of Health Services like DMO, District Surveillance Officer (DSO) District Programme Manager (DPM), RCH Officer (RCHO) of your district, State Officials, institutions, specialists, etc, please call
  - 24 x 7 NHM Health Services helpline **DISHA** on
  - **0471-2552056** ( Normal call, any line)
  - **1056** (toll free from BSNL Lines)