



**B.Sc DEGREE COURSE IN  
NURSING  
(BASIC)  
COMMUNITY HEALTH NURSING- I  
UNIT- IV  
KYASANUR FOREST DISEASE**

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# OBJECTIVES

## SPECIFIC OBJECTIVES

At the end of this presentation the learners will be able to

- define Kyasanur forest disease
- list the causes of Kyasanur forest disease
- explain the mode of transmission
- enumerate the epidemiological determinants

- describe the prevention and control of Kyasanur forest disease
- describe the nursing management of Kyasanur forest disease
- describe the national and international control programmes for Kyasanur forest disease



# INTRODUCTION

- The disease KFD was found in Shimoga district of Karnataka .
- Noticed in 3 more districts of Karnataka
- It was identified in 1957 .
- Since then 400-500 cases per year have been reported
- This disease can cause epizootics with high fatality.



# DEFINITION

- It is a febrile disease associated with hemorrhage caused by kyanur forest disease virus, transmitted to man by animal bite.



## AGENT FACTOR

KFD virus belonging to the family flaviviridae .

## RESERVOIR OF INFECTION

Rats

Squirrels

Birds

Bats

Amplifying host-monkeys



## HOST FACTOR

Predominantly in adult males

Age:20-40 years

People visiting forest with their cattles or for cutting woods

# Kyasanur Forest Disease (KFD) Virus Ecology

The hard tick *Haemaphysalis spinigera* is the reservoir and vector of Kyasanur Forest Disease Virus (KFDV). Once infected, ticks remain so for life and are able to pass KFDV to offspring via the egg.

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

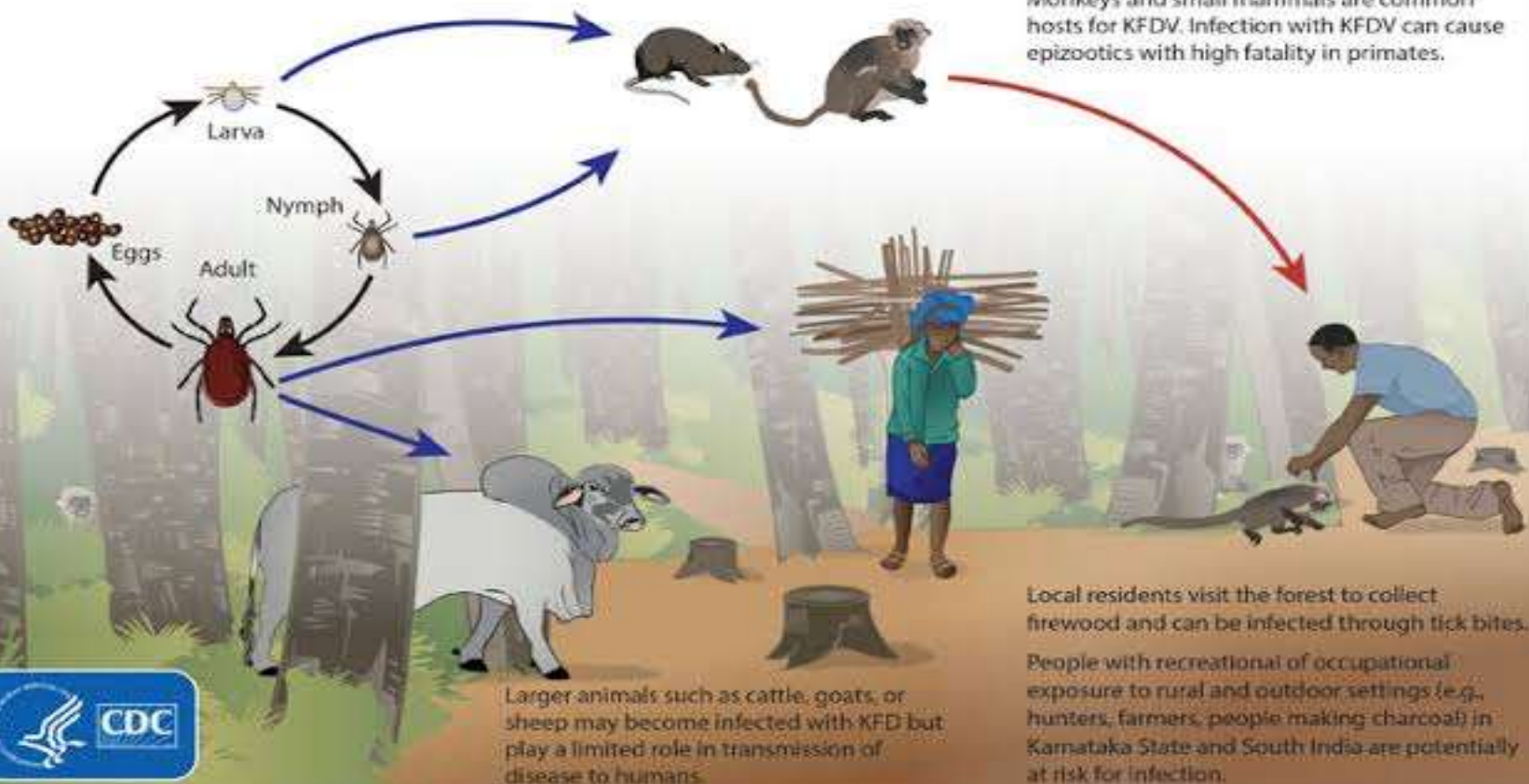
Human cases occur more frequently in drier months (Nov-June) and in Southwest and South India.

Monkeys and small mammals are common hosts for KFDV. Infection with KFDV can cause epizootics with high fatality in primates.

Local residents visit the forest to collect firewood and can be infected through tick bites.

People with recreational or occupational exposure to rural and outdoor settings (e.g., hunters, farmers, people making charcoal) in Karnataka State and South India are potentially at risk for infection.

Larger animals such as cattle, goats, or sheep may become infected with KFD but play a limited role in transmission of disease to humans.







# MODE OF TRANSMISSION

- By the bite of infective ticks and monkeys.
- There are no evidence of man to man transmission.
  
- **Incubation period:**
- 3 to 8 days.

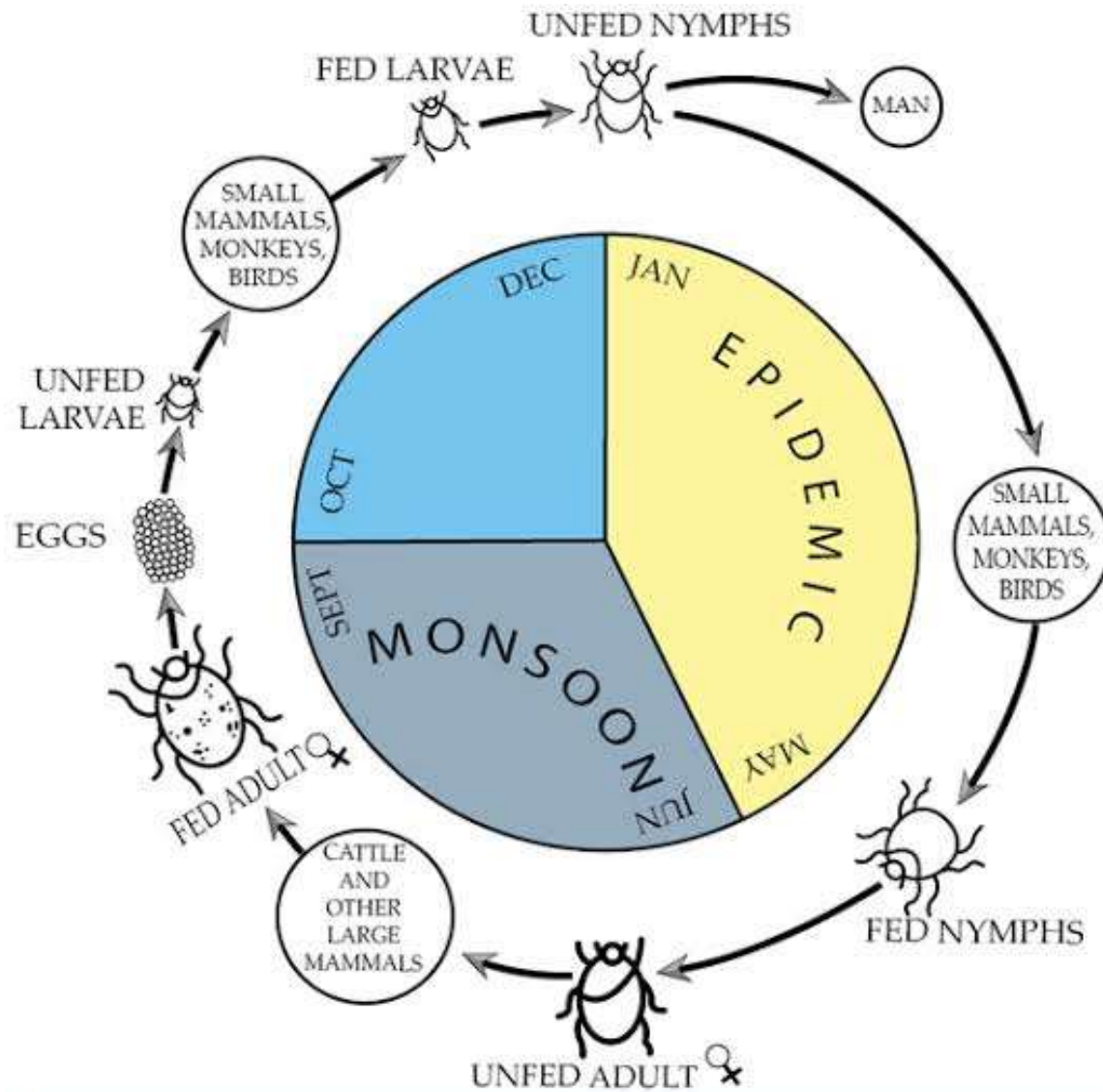


Fig. 1: Life cycle of KFD virus with seasonal incidence of KFD

# SIGNS AND SYMPTOMS

- Sudden onset of fever
- Headache
- Severe myalgia
- Gastro intestinal disturbances
- Bleeding from nose, gums, stomach and intestine
- Severe headache followed by neck stiffness
- Coarse tremors
- Mental disturbances
- Second phase characterized with meningo encephalitis after an afebrile period of 7-21 days



# DIAGNOSIS

By clinical signs

H/O occupation or travel in forest

Detecting the presence of virus in the blood

ELISA

PCR



# PREVENTION

- Control of ticks
- Dispensing of carbaryl fenthion, naled or propoxur at 2.24kg
- Insect repellants
- Protective clothing
- Health education
- Inactivated chick embryo tissue culture vaccine .



# TREATMENT

No specific treatment

Supportive therapy

Vaccine available

Anti pyretics

Analgesics



# Role of community health nurse



- Participate in surveillance
- Data collection
- Symptomatic care and support
- Health education
- Hygienic practices
- Prevention and control



## Control program

- Since 1990, **vaccination** campaigns using formalin-inactivated tissue-culture **vaccine** have been conducted in the districts to which KFD is endemic (Directorate of Health and Family Welfare Services, Government of Karnataka (Manual on **Kyasanur Forest disease**))





# OVERVIEW

- Kyasanur forest disease virus commonly affects the people visiting forest with their cattle's or for cutting woods. Transmitted to man by animal bite. Animals are the reservoirs of this viral infection. Prevention is by three H's- Health Education, History, and Hygiene. Formalin-inactivated tissue-culture vaccine used to control the infection. Only supportive care and symptomatic treatment.



# EVALUATION

1. What is the causative agent for kyasanur forest disease

(a) Bacteria

(b) Virus

(c) Parasite

(d) Fungus

2. What is the reservoir in kyasanur forest disease

(a) Soil

(b) Water

(c) Mosquito

(d) Birds and animals

3. Who is affected more commonly by kyasanur forest disease

(a) Hunters

(b) Formers

(c) Fisherman

(d) Mothers

4. How is kyasanur forest disease transmitted to the humans

- (a) Bites                      (b) Air borne  
(c) Water borne              (d) Food borne

5. Which among the following is the first and initial sign of kyasanur forest disease

- (a) Vomiting                      (b) Diarrhea  
(c) Pain                              (d) Fever



# Reference

- K.Park, Text book of preventive ad social medicine, 25<sup>th</sup> edition., M/S Banarsidas Bhanot publisher, India.
- Web sites:
- <https://www.cdc.gov/kyasanur> forest disease
- <https://www.en.m.wikipedia.org>
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