

Rabies: A Deadly Syndrome

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Overview

Rabies, a viral zoonosis caused by a lyssavirus, is a vaccine-preventable, neglected tropical disease (NTD) that occurs in more than 150 countries and territories. Once clinical symptoms appear, rabies is virtually 100% fatal. Rabies is predominantly affecting poor and vulnerable populations who live in remote rural locations. Dogs are the main source of human rabies deaths, contributing up to 99% of all rabies transmissions to humans. The rabies virus infects the central nervous system of mammals, ultimately causing disease in the brain and death. According to World Health Organization (WHO), the economic burden of dog-mediated rabies is estimated at US\$ 8.6 billion per year.

Rabies is responsible for extensive morbidity and mortality in India. The disease is endemic throughout the country. With the exception of Andaman & Nicobar and Lakshadweep Islands, human cases of rabies are reported from all over the country. About 96% of the mortality and morbidity is associated with dog bites. Cats, wolf, jackal, mongoose and monkeys are other important reservoirs of rabies in India. 97 per cent of rabies deaths in India are caused by dog bites. But reliable numbers of rabies death and dog bites are underreported. WHO estimates 20,000 rabies deaths every year in India. WHO leads the collective “United Against Rabies” to drive progress towards "Zero human deaths from dog-mediated rabies by 2030".

Transmission of Rabies Virus

- Bite of infected rabid animal
- Contact of saliva with broken skin or with mucous membrane
- Corneal transplant from infected one

Symptoms of Rabies

According to the World Health Organization (WHO), it usually takes 3 weeks to 3 months. However, incubation periods can also range from 1 week to 1 year.

- Fever.
- Tiredness (fatigue).
- Bite wound burning, itching, tingling, pain or numbness.
- Cough.
- Sore throat.
- Muscle pain.
- Nausea and vomiting.
- Diarrhoea.
- Agitation and aggression.
- Restlessness.
- Seizures.
- Hallucinations.
- Muscle twitching (fasciculations).
- Tingling, “pins and needles” or other strange sensations.
- Paralysis.
- Coma.
- Death

What Tests Will Be Done to Diagnose Rabies?

- Saliva test
- Skin biopsy
- Cerebrospinal fluid test (lumbar puncture)
- Blood tests
- MRI

What Medications Are Used If One Does Come into Contact with A Suspected Rabid Animal?

Medications prevent an infection from travelling to brain if you’ve been exposed to rabies (post-exposure prophylaxis/PEP). These medications are often combined:

- Rabies vaccine
- Human rabies immune globulin (HRIG)

Prophylaxis Through Rabies Vaccine

A regimen of four 1-mL doses of HDCV or PCEC vaccines should be administered intramuscularly to previously unvaccinated persons. The first dose of the four-dose course should be administered as soon as possible after exposure. Additional doses should be administered on days 3, 7, and 14 after the first vaccination. For adults, the vaccination should always be administered intramuscularly in the deltoid area (arm). For children, the anterolateral aspect of the thigh is also acceptable.



Postexposure Prophylaxis for Non-immunized Individuals	Rabies Vaccine 1.0 mL, IM, one each on days 0, 3, 7, 14 and 28
Postexposure Prophylaxis for Previously Immunized Individuals	Rabies vaccine 1.0 mL, IM (deltoid area), one each on days 0, 7, 21 or 28

How Can Prevent a Rabies?

To address the issue of rabies in our country, National Rabies Control Programme was approved during 12th FYP by Central Sector Scheme to be implemented under the Umbrella of NHM. The Programme had two components – Human and Animal Components in 12th FYP. Human Component for roll out in the all States and UTs through nodal agency NCDC and Animal Health Component through nodal agency Animal Welfare Board of India (AWBI) under the aegis of MoEF & CC, GOI.

The Department of Animal Husbandry & Dairying, Ministry of Fisheries, Animal Husbandry & Dairying, GoI is assisting State Governments for canine anti Rabies vaccination under ASCAD and RKVY Schemes. Animal Welfare Board of India (AWBI) is providing financial aid to the registered NGOs for Animal Birth Control (ABC) programmes for dog population management. In addition to these, State funds are also being utilized by Municipalities and State Animal Husbandry Departments for carrying out ABC programmes and dog vaccination.

Essential Point to Remember in The Direction of Prevent Rabies

- ✓ Regular Pets’ vaccinations under the guidance of Veterinarian



- ✓ Do not handle wild animals and unfamiliar dogs.



- ✓ Don't let your pets roam free without supervision.



- ✓ If you are bitten, wash your wound with antiseptics and seek immediate medical advice. Take proper shots of vaccines under the guidance of health employee.



- ✓ Awareness camp on rabies and preventing dog bites



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