RABIES : ALL FOR 1, ONE HEALTH FOR ALL

Baibhav Kumar & Ashreya Arya
Bihar Veterinary College, Bihar Animal Sciences University (BASU) , Patna.
Corresponding author's email: *baibhavbasu224@gmail.com*
DOI: https://doi.org/10.5281/zenodo.17356473

ABSTRACT

A 3-month-old calf weighing 43 kg was presented in our TVCC with the chief complaint of anorexia, bawling , hypersalivation , severe cough, change in vocalization, incoordination while walking, unable to suck , seizures and history of dog bite 1 month before. Calf was treated with anticonvulsant (Diazepam) , antibiotic (Amoxicillin Sulbactam) , antioxidant (N-acetyl cysteine) and supportive treatment (B-complex). Despite treatment, the symptoms of the underlying condition persisted and continued to impose a significant clinical burden, ultimately leading to the death of the calf.

KEYWORDS : Calf, Hypersalivation, Bawling, Dog bite , Anticonvulsant.

INTRODUCTION

Rabies is a viral , zoonotic and highly fatal disease caused by genus *Lyssavirus* of family *Rhabdoviridae*. It is mainly transmitted through saliva of animals infected with rabies via bites, with domestic dogs serving as the principal reservoir and source of transmission to both humans and livestock in endemic areas. In veterinary medicine, rabies remains a critical concern due to its public health implications, its impact on animal health and welfare, and the economic losses associated with livestock deaths and mandatory control measures. Clinical manifestations in animals are variable and may include sudden behavioral changes, hypersalivation, progressive paralysis, and death. Once the clinical signs and symptoms appear, the disease is invariably fatal.Despite being entirely preventable through effective vaccination programs and post-exposure management, rabies continues to persist in many regions, particularly in areas with limited veterinary infrastructure. Control and eradication efforts in animal especially through mass vaccination of street dogs and surveillance in wildlife reservoirs are central to the global One Health strategy aiming at eliminating dog mediated rabies in humans.

DIAGNOSIS

On the basis of above clinical sign the case was tentatively diagnosed with rabies in calf. The animal was also found to be hydrophobic, hypersalivating (ropiness present) , mydriasis on clinical examination along with change in vocalization due to pharyngeal and laryngeal paralysis and recurrent episode of seizure leading to paralysis and death of calf.

Fig. 1: Mydriasis

Fig. 2: Hypersalivation

Fig 3: Continuos seizure attack lead to paralysis and death of animal.

TREATMENT

Calf was treated with anticonvulsant (Diazepam @0.4mg/kg), antibiotic (Amoxicillin Sulbactam @10mg/kg), antioxidant (N-acetyl cysteine @ 120mg/kg) , B-complex @1ml/kg , infused with normal saline @10ml/kg and given the shot of anti-rabies (1ml).

DISCUSSION

The idea of One Health goes beyond theory it represents a worldwide effort to protect the health of people, animals, and the environment by working together and taking unified steps. The saying "all for one and one health for all" highlights that lasting wellness depends on everyone joining forces and taking responsibility as a community.

ONGOING PROGRAMME ALL OVER THE WORLD

Programme Name	Implementing Organizations	Objectives/Goals	Key Components/Strategies
Zero by 30: Global Strategic Plan to End Human Deaths from Dog-Mediated Rabies by 2030	WHO, WOAH (formerly OIE), FAO, GARC	Eliminating dog mediated rabies deaths in human by 2030	- One Health approach - Mass vaccination in dogs.- Improving access of Post Exposure Prophylaxis. - Community awareness - Enhanced surveillance
Stepwise Approach towards Rabies Elimination (SARE)	FAO, WOAH, WHO, GARC	Guide countries through progressive steps to eliminate rabies	- Capacity assessment - Roadmap development - Identifying gaps in rabies control - Policy and strategy support
National Rabies Control Programme (India)	Ministry of Health and Family Welfare & Ministry of Fisheries, Animal Husbandry and Dairying	Reduce and eliminate rabies in humans and animals	- Free PEP in public hospitals - Mass dog vaccination - Animal rabies surveillance - One Health coordination
World Rabies Day	Global Alliance for Rabies Control (GARC)	Raise global awareness and promote community engagement	- Annual global observance (Sept 28) - Advocacy and education events - Thematic awareness campaigns
Rabies Epidemiological Bulletin (REB)	Global Alliance for Rabies Control (GARC)	Provide real-time data for rabies surveillance	- Online data platform - Supports reporting and decision-making - Country-level and regional data

WOAH Rabies Vaccine Bank	WOAH (World Organisation for Animal Health)	Ensure access to quality vaccines for dog vaccination campaigns	- Vaccine procurement and supply - Supports low- and middle-income countries - Emergency vaccine access

VACCINATION

DOG

Vaccine Type	First Dose Age	Booster	Subsequent Doses
Killed/Inactivated Vaccine	12–16 weeks	After 1 month of 1st dose	Annually

OTHERS

Species	First Dose Age	Booster	Notes
Cattle, Sheep, Goats	6 months	After 4 week	Annual revaccination in endemic areas
Horses	3 months	After 4 week	Annually

HUMAN

Target Group	Schedule	Purpose
High-risk individuals (veterinarians, lab workers, travelers, animal handlers)	Day 0th and Day 7th (2 doses)	Protection before exposure

VACCINATIOIN PROTOCOL

Exposure Category	Vaccine Schedule (No Prior Vaccination)	Additional Treatment
Category II (minor exposure, no bleeding)	Days 0th, 3rd, 7th, 14th	No RIG required
Category III (bites, scratches, mucosa exposure)	Days 0th, 3rd, 7th, 14th	Rabies immunoglobulin (RIG) + wound care
Previously vaccinated	Days 0th and 3rd	No RIG required

NOTE

Point	Details
Wound Management	Immediate washing with soap for 15 minutes and water is critical.
Cold Chain	Vaccines must be stored properly to maintain potency.
Mass Dog Vaccination	≥70% coverage is key for rabies control and elimination
Local Guidelines	Always follow national/state public health and veterinary recommendations

REFERENCES

World Organisation for Animal Health (WOAH). *Terrestrial Animal Health Code – Rabies*.
American Veterinary Medical Association (AVMA). *Rabies Vaccination and Prevention Guidelines*, 2021.
Veterinary microbiology and microbiological disease , Quinn and carter.
WHO Expert Consultation on Rabies (3rd report, 2018).
USDA-APHIS Veterinary Services. *Rabies Vaccination Protocols for Livestock*.

National Centre for Disease Control (India). *National Rabies Control Programme Guidelines*.
FAO, WOAH, WHO. *One Health Rabies Control Framework*.
World Health Organization (WHO). *Rabies Vaccines: WHO Position Paper*, 2018.
CDC (Centers for Disease Control and Prevention). *Rabies: Pre-Exposure Prophylaxis Guidelines*.
GARC (Global Alliance for Rabies Control).
WHO, FAO, WOAH, GARC. *Zero by 30: Global Strategic Plan for the Elimination of Dog-Mediated Human Rabies by 2030*.
WHO. *Rabies: Key Facts*, 2023.
Global Alliance for Rabies Control (GARC). *Rabies Epidemiological Bulletin*.

Cite this article:
Baibhav Kumar & Ashreya Arya. (2025). Rabies : all for 1, one health for all. Vet Farm Frontier, 02(09), 84–87. https://doi.org/10.5281/zenodo.17356473