

A CASE OF RABIES IN AN INDIAN ELEPHANT *ELEPHAS MAXIMUS*

B. Aravind¹, M. Anilkumar², S. Raju³ and M.R. Saseendranath⁴

¹ Senior Veterinary Surgeon, ³ Veterinary Surgeon, District Veterinary Centre, Kollam, Kerala, India

² Senior Veterinary Surgeon, Veterinary Hospital, Chavara, Kollam, Kerala, India

⁴ Associate Professor and Head, Department of Veterinary Epidemiology and Preventive Medicine, College of Veterinary and Animal Sciences, Kerala Agricultural University, Mannuthy, Kerala, India

The tusker captive elephant (named Hariprasad, aged 28 years) belonging to the Minnamthottil temple, Chavara, Kollam district, Kerala, southern India, was suffering from posterior paralysis. The history revealed that the animal had an injury on his left eye (an incised wound) inflicted by the mahouts on 2 March 2005. The local veterinarian surgically corrected it. Postoperative antibiotic and anti-inflammatory therapy was given. The elephant started showing symptoms of paralysis in the right hind limb on 14 March 2005. The animal was dragging the right limb and showed severe difficulty in walking. He was observed to lie down frequently and had difficulty in getting up. On 15 March onward the animal had difficulty in bearing weight on the left hind limb also. He started refusing food. Urination and defecation decreased. On 16 March he started showing behavioural changes as in musth and tried to attack people with his trunk. There was slight temporal discharge also. The hindquarter had become totally paralytic.

On 17 March, the veterinarian treating the elephant lifted the animal and put him in slings using rope and crane, but the attempts were futile. Penile edema was noticed in the evening, but it was relieved once the animal was released from the slings. Supportive therapy was given by administering fluids and vitamins.

OBSERVATIONS

On 18 March 2005 the animal was lying in left lateral recumbency. The mucous membrane was pale roseate. The rectal temperature was subnormal (95.2°F). The tail and hindquarters were totally paralytic and flaccid. The respiration rate was low (26/min). There was no food and water intake and the animal was dehydrated and did not pass dung and urine. The animal was not able to lift his head and trunk. A central nervous system infection was suspected.

On 19 March the animal died at 1430hrs after showing symptoms for five days.

The postmortem examination revealed no gross lesions in liver and lungs. Epicardial haemorrhage was noticed. Petechial haemorrhages were noticed in the intestinal mucous membrane. Splenomegally and meningeal congestion were noticed. Samples were collected from brain, liver, kidney and spleen. Blood smear examination did not reveal any bacterial or

haemoprotzoan infection. Since clinical signs were suggestive of an infection of the central nervous system, fluorescent antibody test (CDC, 2003) was done on brain tissues to rule out rabies viral infection at the Rabies Diagnostic Unit at District Veterinary Centre, Kollam. The sample was found positive for rabies viral infection. The sample was sent to The Department of Veterinary Epidemiology and Preventive Medicine at College of Veterinary and Animal Sciences Mannuthy, Thrissur, Kerala and was confirmed positive. Again the sample on PCR tests at Indian Immunologicals, Hyderabad was found to be positive for rabies.

Discussion

Rabies is endemic in Kerala especially in Kollam district. This is evident from the fact that about 30 per cent of the cases presented at rabies diagnostic unit, Kollam, were positive for rabies during the last four years. As far as Kerala is concerned, from December to April is the festival season where a number of elephants participate in processions. Usually the processions end by late night and they traverse long distance to reach the next place of 'duty' during the night hours. Sometimes they may rest on the way. The chances of getting exposed to rabies either through dog bite or cat bite are very high during the night hours and may not be noticed by the mahouts.

Elephants usually get bitten either on the trunk or hind limbs. During the last year one elephant was bitten on its trunk by a stray dog and was given post exposure vaccination and did not develop rabies. Because these elephants are always tethered they are more prone to wounds on their hind limbs. Hence the chances of transmission of rabies through lick from a rabid animal are very high. The mahouts may not identify the exposure. Further, the elephants are taken to forests for timber work during the off-season where there is the possibility of exposure to rabies from the wild population also. These facts point out the necessity of prophylactic antirabies treatment among captive elephant population.

The latest case of elephant rabies was reported from Sri Lanka in 1998 wherein an adult (reported to be 84) became aggressive, restless and unsteady, with secretion from the temporal glands (Wimalaratne & Kodikara, 1999). On the sixth day she was partly blind and completely anorectic, trunk lame and was constantly falling down. She died on the ninth day. Postmortem examination showed brain being vascular and brain smear positive for rabies antigen.

REFERENCES

- Centers for Disease Control (CDC), Viral and Rickettsial Zoonoses Branch (VRZB) (2003).** Protocol for postmortem diagnosis of rabies in animals by direct fluorescent antibody testing, 22p.
Wimalaratne, O. and D.S. Kodikara (1999). First reported case of Elephant rabies in Sri Lanka. *Veterinary Record* 144(4): 98.

