

**CASE REPORT****UNSUSPECTED RESERVOIR OF RABIES IN ETHIOPIA: MONGOOSE**Yared Mamushet, MD, MSc<sup>1\*</sup>**ABSTRACT**

*A five years old female child from Hosanna town, Hadya Zone, South Ethiopia presented to health facility following an aggressive bite by a mongoose. Following the bite, she received wound care and sent home with reassurance. After about 90 days, she presented with classic signs and symptoms suggestive of rabies and died after 5*

**INTRODUCTION**

Rabies is a viral illness of zoonotic origin which affects the central nervous system and fatal in nearly all cases once symptoms started. Usually it has an incubation period of 30-90 days and patients are symptomless during this time. Clinically it has prodromes of fever, headache to be followed by hydrophobia, insomnia, loss of appetite, paralysis, behavioural changes and death in 2-10 days.

Being a disease of warm blooded animals it has a range of reservoirs, both domestic and wild animals. Globally it is one of the neglected and underreported illnesses mainly affecting the poor and rural people (1). Worldwide more than 95 % of human rabies is transmitted by dogs (2). And over 90% of rabies deaths occur in Africa and Asia, with 40% affected are children below 15 years of age (3,4).

In the Americas after a successful control of canine rabies bats are the major sources while in Puerto Rico and some Caribbean countries mongoose are major rabies reservoirs. In Puerto Rico 75% of rabies is due to mongoose rabies virus (5).

Mongoose called “Shelemitmat” in Amharic language, are small to medium sized carnivores living in many countries mainly in Africa, south Asia and south Europe. Though no study on mongoose distribution in Ethiopia, it is seen in many parts of the country and one particular species called the dwarf, Ethiopian mongoose lives in southeastern Ethiopia (6). Mongoose have a short leg, pointed mouth, small ears and big canine tooth, grey to light brown in color with bushy long tail, they live in thorny bushes and around human settlements. They feed on insects, frog, snake, lizard and at times fruits and vegetables. Normally they are non-hostile towards humans and uncommon to bite. With some excep-



Figure. A picture of mongoose (Source: <https://pixabay.com/en/mongoose>)

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## CASE SUMMARY

A 5 years old girl was in her residential compound in Hosaena town, south Ethiopia when families rushed after a loud cry to witness a mongoose or “Sola” in Hadiyya language biting her face ferociously and they need to struggle hard to pull it forcefully away from her left cheek. The mongoose was chased and killed. The child was taken to the nearby health center who suggested a hospital visit, and in Hosaena hospital. The on-duty healthcare provider did wound care, tetanus prophylaxis and gave her syrup and families claim he advised them there is nothing to worry as she had finished her childhood vaccination and they returned home and the facial wound healed in 10 days. Then the child was healthy for 3 months till one day when she started to complain headache and got restless moving around with excessive sweating. Subsequently she developed difficulty of swallowing food or drink, hyper salivation, insomnia and started to bite people around her (8 in total).

Other 8 villagers were also exposed to her secretion while caring for her. After 5 days of stay in that condition she was brought to Addis Ababa and seen at a private clinic and she was limp, unable to move, hyper salivating and lethargic and with a consideration of dehydration after intravenous fluid was given she was referred for a hospital care, and we became aware that she died the same night about six hours later, while families claim they were preparing to take her to the hospital. Rabies was incriminated as the cause of her death and all potentially exposed family members and villagers received anti-rabies post exposure prophylaxis (PEP).

## DISCUSSION

Unsuspected animals like mongoose can be sources of rabies. Mongoose usually avoids and run away from humans but if it comes to a human habitat and without provocation it attacks aggressively, rabies should be suspected. While dogs are the major sources of rabies neglecting other potential sources of rabies in our vicinity like cats, cows, horses, hyena, fox and monkeys could result in tragic consequences.

In general if any animal acts strangely like a wild animal become overly friendly and timid, if a nocturnal animal is seen roaming on day time rabies should be suspected(8).

Rabies should be prevented by vaccinating domestic animals and knowing the sign symptom of rabies in both domestic and wild animals and taking the proper precautions. When a rabid animal bites, it can effectively be managed with wound cleaning and post exposure prophylaxis. So any suspected cases of animal bite should be scrutinized to avoid fatal diagnostic delays (9).

Unawareness on the part of health care givers and the public about mongoose as a potential reservoir of rabies should be changed in our country. Policy makers and health officials should give due attention to lead awareness creation, surveillances and contact tracings both to mongoose and other animal reservoirs of rabies. Such actions will help in protecting human life and prevent livestock damage.

**Conclusion:** Animals other than dog can transmit rabies; and the case highlights the need for increased awareness among health care providers and the public about the potential of mongoose-related rabies in Ethiopia.

### **Consent**

Informed consent was obtained from the family of the patient for publication of this case report.

### **Competing interests**

We declare that we have no competing interests

## ACKNOWLEDGEMENT

I would like to thank Megabi Daniel Waleign for facilitating all the information from Hosaena hospital and local health center and interviewing the families.

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