

Veterinary and Medical Management of an Animal Rabies Outbreak in West Algeria: Infringements to the Current Legislation

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Abstract: In Algeria, dogs remain the most important rabies-mediator in animals and man. Then, a comprehensive regulation was done for containing this important zoonosis infection. In this report, sanitary management of a supposed animal rabies outbreak was described. The investigation courses and decisions taken by the representative of the competent public health authorities were marred by serious infringements to laws. So, the financial and logistical means insufficiencies and the lack in coordination between veterinary and medical departments seem to be the main reasons for these irregularities.

Key words: Animal Bites • Rabies • Algerian Laws

INTRODUCTION

The cosmopolitan lineage of canine rabies virus is believed to have spread across the African continent during the European colonization [1]. Today, the Western European countries, presently free of canine and vulpine rabies, continue to declare some human and animal cases mostly imported from North Africa [2]. Thus, elimination of canine rabies has been achieved in some parts of the world, but the disease still kills many thousands of people each year in Africa [3]. Then, estimates of the burden of rabies in the continent have always been uncertain, because of the lack of good data [1]; indeed, the true impact of rabies remains undefined [4]. The rabies situation in the Algerian territory is dominated by dog-mediated transmission with suspected spillover infections in wildlife species such foxes and jackals [5]. So, in Tiaret district, located in Algerian highland, the free-ranging dogs seem to be the most important rabies mediator. A comprehensive regulation was done for containing this important zoonosis infection in Algeria. Hence, in order to stamp out animals and human rabies, a control strategy plan was adopted in Algeria since 1996; it was mainly based on three actions: reduction of stray animal population; vaccination of domestic carnivores and cattle [2]. This report aims to shed light on some causes responsible of fight policy failure against the human and animal rabies in Algeria.

Case History: The rabies outbreak was localized in the rural site of Ras el Ain (Mahdia area), 30km in the East of Tiaret District (800.000 inhabitants) in Western Algeria. In the night of Thursday 12th to Friday, 13th November 2015, a female donkey aged about 20 years, pertaining to a villager of the cited rural dwellings clustering, had bitten an adult man (40th-year-old) at its hand; also, two domestic animals (a multiparous cow and her calf) have been bitten.

Afterward, the villagers have intervened and the biter animal was restrained using a rope. The donkey was dead instantly early in the morning and buried with the attendance of the council authority representative and a private veterinarian. Then, the villagers deny that the biter animal was theirs. However, they were informed about the danger they were running in the case which the animal was considered as stray.

Considering the incident occurrence on weekly rest days, the local veterinary and medical officer's authorities were preceded to the site 60h after. Then, villagers recognized their animal property. The mandated veterinarian ordered, on the first step, to kill a male donkey and a dog which has been in nearest contact with the biter animal; and on the second, to slaughter the cow and calf within a period of eight days following the bites. In the morning, the bitten man has received adequate medical treatment. However, other five persons, who have been in contact with the presumed rabid animal, received the post-exposure prophylaxis 72h later.

Thereafter, the competent veterinary service has not undertaken any preventive medical measure against the other animals (dogs, cats, donkeys and cattle) of the site. Moreover, the free-ranging dogs remain at large in the area. With regard to bitten cattle, the owner sold them to a private butcher without an emergency slaughter certificate.

DISCUSSION

Domestic donkey rabies in Algeria, with 8% of occurrence, ranks third after canine (49 %) and cattle (26%) [5]. Thus, donkey is a potential rabies transmission-mediator considering the animal use for multiple works and donkey bites are an uncommon cause of injury, particularly, in children [6].

On the other side, rabies of wild animals, habitually neglected, especially in foxes, which is considered as host specie, play a dominant role in the transmission and maintenance of the disease, towards other mammals; including dogs [7].

Therefore, from this point of view, efforts should focus as well on the rabies fox, given its frequent contact with the farm animals and its large population in Tiaret district. Whereas, the rabies virus transmission from wildlife to dogs remain undocumented in Algeria.

Algerian legislation considers that animal rabies is an important zoonosis which may be reported urgently to the local competent veterinary authorities [8]. In our case, the biter donkey was considered as potentially suspect of rabies [8]; for this reason it was buried rapidly, which made impossible the confirmation of rabies infection by laboratory testing [1, 9]. This procedure results in an underestimation of the real animal rabies occurrence.

The belated arrival of the veterinary officer had adverse consequences on the scene of the incident, like the movement of persons and animals and disappearance and destruction of evidence. In order to contain these risks, the law stated that the veterinary officer shall be present on-site without delay [9]. However, the insufficient resources available to veterinary services; particularly, the transport means and supplementary compensation covering working of the weekly rest days, seems to be the reason of this irregularity.

The slaughtering measure taken for cow and calf was in accordance with art 8 of law N°15/96 [8]. Dog and male donkey were killed in the additional security measure, regarding the affirmation of villagers, about their close

contact with biter animal [9]; in addition, they have not been vaccinated [10]. On the other hand, all other dogs of the site were not kept on their leashes and not muzzled and no measure was conducted towards the stray dogs, in violation of the law [9,10].

The post-exposure prophylaxis should be instituted immediately and a careful risk assessment should ideally be conducted by a qualified medical professional [1]. But the persons exposed have been vaccinated lately, which might put their health at risk. This anomaly, as well, is relayed to the lack in the investigations' course, or due to the lack of coordination between veterinary and medical sectors.

However, the fact that the bitten cattle have been sold to a private butcher mean that there was no assurance that animals were really slaughtered and, if so, under what conditions? It was another serious infringement to the law [9]. So, despite the fact that rabies vaccination of canine species [9] and cattle [11] has been made compulsory by the current Algerian laws, the occurrence of rabies in both species remains relatively high [5].

One of the reasons for the inefficiency of the vaccination campaigns, targeting cattle, was the derisory amount of remuneration allocated for each head vaccinated (0.3 US \$) [12] and the high cost of displacement in areas which are difficult to access. While, vaccination campaigns must be strategically planned, well managed and adequately funded [1].

Lastly, freedom from dog-mediated human rabies is a global public good and the decline in human rabies deaths closely mirrors the decline in dog rabies cases [13].

CONCLUSION

Animal and human rabies is still prevalent in Algeria, because of ineffective implementation of rabies control and vaccination programs for the reservoir animals. So, controlling dog-mediated rabies, especially in free-ranging dogs, is the first priority to reduce contamination of other domestic animal species and human. However, the serious handicap to the fight against this zoonosis seem to be, in our case, on one hand, a failure to the strict application of the law, due to ignorance or negligence and, on other, the insufficient financial and logistical allocated means and insufficient coordination between veterinary and medical departments due to non-clearly defined responsibilities.

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