ABSTRACT

Anthrax is an important zoonotic disease in Kenya causing high morbidity and mortality in both human, wild life and livestock. It is endemic and was reported in many parts of the country and periods outbreaks occur in Arid and Semi-arid lands (ASALS) such as Wajir, Isiolo and Marsabit. For future prevention of the disease, there is a need to develop the risk map of anthrax and assess the knowledge, attitude and practices of anthrax among pastoralists. The objectives of the current study were to 1. Map the spatial distribution of hotspots of anthrax in Wajir, Isiolo and Marsabit counties, 2. To identify the ecological parameters that influences the occurrence of anthrax in the three counties, 3. To assess the Knowledge, attitude and practices of the disease by pastoralists in the three counties. The study was cross-sectional whereby various areas of anthrax outbreaks were identified through the veterinary departments in the three study counties of Wajir, Isiolo and Marsabit. These areas were visited and using systematic sampling methods, a total of 400 households were visited. Data were collected through questionnaires administered via personal interviews. Information collected included demographic characteristics of the households, knowledge on anthrax, attitude and practices on the disease. The ecological niche model was developed to map the future occurrences of the disease. The ecological niche model predicted the occurrence of anthrax especially in areas adjacent to the points where previous anthrax cases had occurred. The model predicted an endemic status of the disease in all the three study counties. The model further identified some parameters which might be responsible for the persistence of anthrax in the environment including isothermality, temperature seasonality, precipitation of the wettest month, elevation and soil pH.

Pastoralists had adequate knowledge on anthrax. They correctly pointed out the clinical signs of anthrax in livestock such as sudden death, bleeding from body orifices and cutaneous sores. The indigenous knowledge was uniform in all the three counties. Despite that knowledge, they reportedly engaged in dangerous practices that would expose them to infection by anthrax. These practices included consumption of meat from suspect anthrax cases, opening of carcasses of dead animals, and throwing of anthrax suspect carcasses in bushes. Anthrax is a well known disease in this pastoral setting. There is a need for education programmes to be designed for this community especially with regard to proper handling of suspect anthrax cases. The continuous anthrax prevention efforts should be initiated through vaccination of livestock.