Epidemiology: Open Access
ISSN: 2161-1165
2020
Vol.10 No.6

Molecular characterization of circulating rabies virus and knowledge attitude practice in Uganda

Michael Omodo

National Animal Disease Diagnostics and Epidemiology Centre, Uganda

Abstract

Introduction: Rabies is a viral disease that affects mammals and remains a public health threat in Uganda. The aim of study was to explore knowledge, Attitude, Practice of rabies and molecular epidemiology of rabies virus in Uganda.

Methodology: Knowledge, Attitude and Practices (KAP) survey about rabies, data was collected purposively based on animal biting history from veterinary departments, Medical units and selected households. Eighty-four (84) households in Ntoroko and Moyo districts. Fisher's exact test or the Chi-square X^2 tests were used to analyse data. Thirty-five (35) brain tissues from dogs, cattle, goats, foxes and jackals, in Jinja, Kabale, Kabarole, Kabongo, Jinja, Moyo, Ntoroko and Namayingo were tested. Fluorescent antibody test was used to detect rabies virus, RNA was extracted using Qiagen kit, and one-step RT-PCR was performed PCR products were sequenced by automated Sanger sequencing method.

Results: Twenty-seven (27) tested positive for rabies antigen using Fluorescent antibody test, and PCR. Dog biting episodes in humans were 75.00% (Moyo), Ntoroko 62.5%. In Moyo district, 18.18% of the persons bitten by dogs washed wounds and 17.50% in Ntoroko prior to medical treatment. Identified sequences (500nt) were closely with 97% to isolates from Tanzania, Rwanda, Burundi, Nigeria, Central African Republic and Sudan. Phylogenetic analysis revealed that both Ntoroko and Moyo districts had mixed lineages of "Africa 1A" and "Africa 1B" Rabies virus clades. Jinja, Kabongo, Kabarole, Namayingo and Kabale isolates belong to lineage Africa 1B" Rabies virus clade.

Conclusion: Africa 1A and Africa 1B clades circulating in dogs co-exist in Moyo and Ntoroko districts. A single clade 1B was detected in Jinja, Namayingo, Kabongo, Kabale and Kabarole. The risk of rabies is high in Moyo and Ntoroko that borders the Republic of RSS and DRC due to reported dog bites from stray dogs and cross boarder movements of people with dogs into Uganda.

Biography:

Michael Omodo is presently working at National Animal Disease Diagnostics and Epidemiology Centre, Uganda.

Speaker Publications:

1. "Rabies in Uganda: Rabies knowledge, attitude and practice and molecular characterization of circulating virus strains"; Europe PMC Vol 20/ 2020.

11th International Conference on Emerging Infectious Diseases; Webinar- November 23-24, 2020.

Abstract Citation:

Michael Omodo, Molecular characterization of circulating rabies virus and knowledge attitude practice in Uganda, Emerging Diseases 2020, 11th International Conference on Emerging Infectious Diseases; Webinar- November 23-24, 2020(https://emerging-diseases.infectiousconferences.com/abstract/2020/molecular-characterization-of-circulating-rabies-virus-and-knowledge-attitude-practice-in-uganda)