

Relevance of Lovebirds (*Agapornis roseicollis* Selby, 1836) in Experimental Epidemiology of Newcastle Disease

Gislaine Regina Vieira Martins, Antonio Carlos Paulillo, Elizabeth Moreira dos Santos Schmidt, Janine Denadai, Adriano Torres Carrasco and Ivan Felismino Charas dos Santos

Department of Surgery, Faculty of Veterinary, Eduardo Mondlane University, Maputo, Mozambique

Abstract :

Studies were made to clarify the role that was played by the lovebirds (*Agapornis roseicollis*) in the epidemiological plan, under the perspective of its being a potential source of infection of Newcastle Disease Virus (NDV). The study used Specific-Pathogen-Free chicks (SPF) that were housed with lovebirds inoculated with a pathogenic strain (velogenic viscerotropic) of NDV pathogenic to chickens, by the ocular-nasal via. Each group was composed of six SPF chicks and four lovebirds. After five days of the inoculation of the lovebirds with NDV, SPF chicks were put together with each group of lovebirds. Cloacae swabs were collected after 9, 14 and 21 days post-challenge in both species (lovebirds and SPF chicks) for genome viral excretion by Reverse Transcription Polymerase Chain Reaction (RT-PCR). Lovebirds did not demonstrate any clinical signs of NDV. They were refractory to the clinical disease with the NDV. However, NDV genome was detected 9 and 21 days after challenge. This study shows that lovebirds can be carriers NDV. Moreover, 100% of SPF chicks allocated with the infected lovebirds demonstrated clinical signs and lesions suggestive of NDV. In these birds, NDV genome was detected 9, 14 and 21 days after challenge. Thus, the transmission of the pathogenic virus from the lovebirds to SPF chicks that were housed together was evident until 21 days of the experimental infection. This study reveals the importance of lovebirds from the epidemiological point of view as potential source of infection of the NDV to other avian species that could be raised near this species.

Key Word :

Agapornis roseicollis , Newcastle disease, Psittacidae, lovebirds, epidemiology

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