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Seroprevalence of Newcastle virus in backyard poultry of Ardabil province, Iran

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Abstract

Backyard poultry can cause spread Newcastle virus to industrial poultry as reservoirs and vectors. The aim of this study was to survey seroprevalence of Newcastle virus in rural domestic poultry of Ardabil province, northwest of Iran. In this study, 943 blood serum samples were randomly collected from backyard poultry of 40 villages. The hemagglutination inhibition (HI) test was performed on the serum samples according to OIE protocol to detect Newcastle virus. In this study sera with titers ≥ 4 (i.e. \log_2) were considered positive. Out of 40 sampled villages, 57.5 % villages and out of 940 birds sampled, 23.5% birds were positive for ND virus. Among different bird species, the highest sero-positive prevalence belonged to chickens. The results of this study showed that seroprevalence of Newcastle virus and its circulation in rural domestic poultry of Ardabil province. The implementation of disease prevention and control measures such as compliance biosecurity principles, vaccination and continuous monitoring of circulating viruses in rural poultry to reduce the contamination of domestic poultry and prevent the spread of the virus to industrial poultry are necessary.

Keywords: Newcastle virus, rural poultry, HI, Ardabil province

