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Isolation and molecular detection of infectious laryngotracheitis virus from the respiratory tract of layer birds

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The present study was conducted to isolate and characterize the infectious laryngotracheitis virus from respiratory tract of layer birds. PCR was done for the detection of viral antigen from the field and laboratory samples. For this, a total of 93 fresh tracheal samples were collected from layer birds dying and suffering of classical ILT syndrome from 50 different farms and the virus was attempted to grow in embryonated chicken eggs and were further identified by PCR. Among the 50 farms, 14 farms were positive for ILTV. Clinical signs included gasping, coughing, rattling, reduced productivity, conjunctivitis, watery eyes, swollen orbital sinuses and bloody exudates on the walls of cages or pens from severe cases were observed in almost all the ILTV-affected farms. At necropsy, the gross lesions were observed mainly the presence of blood, mucus, yellow caseous exudates, or a hollow caseous cast in the trachea. Field samples were collected from suspected layer chickens of commercial layer farms and were cultivated into 10-12 days old embryonated chicken eggs through chorioallantoic membrane (CAM) route for isolation of field virus. In the embryonated chicken eggs, virus produced discrete pock lesions as early as 2 days of post inoculation and embryo death was recorded within 4-6 days of inoculation. Finally, PCR was done for the detection of ILTV antigen in different tissue samples and compared its sensitivity with other conventional methods. Out of three methods employed for ILTV antigen detection, PCR was most sensitive followed by avian embryo culture and AGIDT was least sensitive.

Biography

Md. Ehsanul Haque has completed his DVM degree from Phatuakhali Science and Technology University and MS Degree in Microbiology at the age of 27 years from Bangladesh Agricultural University. He is the Microbiologist of FnF vaccine unit, a pharmaceuticals organization in Bangladesh.

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