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Nucleocapsid Gene Sequence Analysis and Characterization of an Indian Isolate of Avian Infectious bronchitis virus

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Abstarc :

Avian Infectious bronchitis virus belongs to the family Coronaviridae. It is an enveloped virus with large positive stranded RNA genome. In the present study RNA was isolated from viral suspension and transcribed into cDNA. Poultry postmortem cases showing lesions of visceral gout were collected and infectious bronchitis virus were isolated. About 1.2 kb Nucleocapsid gene of virus was amplified by RT-PCR from four clinical samples. The amplified product was cloned and the nucleotide sequence of the N gene of an Indian field isolate was determined. The Indian IBV isolate exhibited 95% homology with Korean isolates and Chinese vaccine strains indicated conserved nature of N gene. Haemagglutination assay and chicken embryo inoculation was carried out for antigenic studies of the virus. The virus titre was confirmed using haemagglutination assay and IBVN2 showed the 1:2048+ titre. Propagation of virus was done by chorioallantoic method of inoculation of virus suspension in embryonated eggs. Characteristic curling and dwarfing of embryos was noticed in CAM inoculated embryonated eggs. Inoculated eggs showed teratogenic changes and deposition of urates as indication of naphropathogenic nature of virus.

Key Word :
Infectious bronchitis virus, chorioallantoic method inoculation, N gene, accession no. EF025537, nucleotide sequence, amino acid, virus isolate

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