

Characterization of three infectious bursal disease virus isolates obtained from layer chickens in Iran.

ABSTRACT

Three infectious bursal disease viruses (IBDVs) were isolated from field outbreaks in IBDV-vaccinated and non-vaccinated layer chicken flocks. Agar gel precipitation test (AGPT), immunoperoxidase staining, transmission electron microscopy (TEM), inoculation into embryonated eggs, and chicken embryo fibroblasts (CEFs) confirmed that the isolates were IBDVs. RT-PCR, restriction fragment length polymorphism (RFLP), and phylogenetic analysis demonstrated that the isolates were very virulent IBDV (vvIBDV) and showed a nucleotide sequence similarity of 96.3 to 99.8% in comparison with other vvIBDV strains. It was concluded that the Iranian isolates represented vvIBDV of serotype 1 originating from Europe, Japan, and China.

Keyword: Infectious bursal disease virus; Restriction fragment length polymorphism; Sequence and phylogenetic analysis.