I prefer:

□ ORAL presentation

☑ POSTER presentation

**Pathogenicity and epidemiological survey of fowl adenovirus in Shandong Province from 2021 to 2022**

Tailong Wang1†, Fanliang Meng1†, Changxiu Chen2, Yesheng Shen1, Peixun Li1, Jie Xu1, Zhaoyang Feng1, Xiuchao Qu1, Fuyong Wang1, Baoquan Li1\* and Mengda Liu3\*

[1](mailto:1wtlpride@163.com,)[wtlpride@163.com,](mailto:1wtlpride@163.com,) Shandong Provincial Key Laboratory of Animal Biotechnology and Disease Control and Prevention, College of Animal Science and Veterinary Medicine, Shandong Agricultural University, Shandong Agricultural University, Tai'an 271018, P.R.China

2College of Agricultural and Forestry Sciences, Linyi University, Linyi 276000, P.R.China

3Division of Zoonoses Surveillance,China Animal Health and Epidemiology Center, Qingdao, China

**Abstract:**

**Background/Objective:** In recent years, the poultry industry had been markedly affected by adenoviral diseases such as hydropericardium syndrome and inclusion body hepatitis caused by fowl adenovirus (FAdV), which have become increasingly prevalent in China. Shandong Province, China, is an important area for poultry breeding where various complex and diverse FAdV serotypes were isolated. However, the dominant strains and their pathogenic characteristics are not yet reported.

**Methods:** We performed testing of samples suspected of being infected with FAdV, gene sequencing, genetic evolutionary tree construction to analyze viral epidemiological trends, and animal regression tests to compare differences in pathogenicity between strains.

**Results:** Result showing that the local dominant serotypes of FAdV epidemics were FAdV-2, FAdV-4, FAdV-8b, and FAdV-11. Their mortality rates in the 17-day-old specific-pathogen-free (SPF) chicks ranged from 10 to 80%; clinical signs included mental depression, diarrhea, and wasting. The maximum duration of viral shedding was 14 days. The highest incidence in all infected groups was on days 5-9, and then gradual regression occurred thereafter. The most pronounced symptoms occurred in chicks infected with FAdV-4, including pericardial effusion and inclusion body hepatitis lesions.

**Conclusion:** Our results add to the current epidemiological data on FAdV in poultry flocks in Shandong and elucidate the pathogenicity of dominant serotypes. This information may be important for FAdV vaccine development and comprehensive epidemic prevention and control.

**Keywords:** fowl adenovirus, hexon gene, genetic evolutionary analysis, epidemiological survey, pathogenicity