

Experimental Infection with Cheolwon/Incheon Isolates of Classical Swine Fever Virus in Pig: Clinical Signs and Pathology

Jae-hoon Kim, Kyung-il Kang¹, In-soon Roh¹, Heui-jin Kim¹, Young-hwa Jean¹, Sang-ho Cha¹, Eun-jin Choi¹, So-rah Yoon¹, Ju-myung Seok¹, Jae-young Song¹ and Jun-heon Kweon¹

Dept. of Vet. Med., College of Agriculture and Life Science, Cheju National Univ., Jeju, Korea

¹National Veterinary Research & Quarantine Service, Anyang, Korea

E-mail: kimjhoon@cheju.ac.kr

Introduction

Several cases of classical swine fever (CSF) were reoccurred in Cheolwon province and Incheon city in 2002. Two isolates (Cheolwon and Incheon) of classical swine fever viruses (CSFV) were successfully isolated and classified into genotype-2 with a phylogenetic analysis [1, 2].

Materials and Methods

We performed experimental infection in two groups of CSFV antibody free 50-day-week-old pigs with the Cheolwon isolate and the Incheon isolate of CSFV. Ten pigs were inoculated intramuscularly with each isolate of CSFV. Five or six additional pigs were housed in the same room but caged separately. Negative control pigs were kept in complete isolated house at the National Veterinary Research and Quarantine Service.

Results

The inoculated pigs developed clinical signs such as pyrexia, anorexia, lethargy from 4-5 days of post-inoculation (DPI) in both groups, and diarrhea or neurologic signs from 6-7 DPI in Cheolwon group and 9 DPI in Incheon group, respectively. Leukopenia could be detected from 3-5 DPI. All of the infected pigs were died or euthanized 4-23 DPI. In contact pigs, clinical signs were observed from 10 DPI in Cheolwon group and 8 DPI in Incheon group. Leukopenia and pyrexia were detected from 9-14 DPI. Most of the contact pigs died from 13-18 DPI. Pathologic changes were frequently detected in lymph nodes and large intestine. Histo-

pathologically nonsuppurative encephalitis, reticular cell hyperplasia in lymphoid tissue, and endothelial swelling of capillary were observed in most pigs.

Discussion

The results suggested that CSFV isolates from Cheolwon and Incheon were highly virulent strain and caused acute form of pathogenicity. We could not find any evidence of different pathogenicity between two strains of CSFV.

References

1. Paton, D. J. et al. *Vet. Microbiol.* 2000, **73**, 137-157.
2. Van Oirschot. *Disease of Swine*, pp 159 - 172. 8th ed. Iowa state university presss, Ames, Iowa. 1999.