

親豬源口蹄疫病毒臺灣分離株的比較

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摘要

臺灣不幸於 1997 年 3 月爆發親豬源口蹄疫疫情，經全面施行口蹄疫疫苗免疫注射後，得以有效控制疫情，並於 2003 年 5 月 22 日得到世界動物衛生組織（O.I.E.）認定為施打口蹄疫疫苗的非疫區。為能逐步成為不使用疫苗的口蹄疫非疫區，於 2007 年 4 月 1 日起，分五階段施行口蹄疫階段性停打策略。然而不幸於 2009 年 2 月，雲林縣及彰化縣豬場分別爆發一例口蹄疫疫情，使得台灣再度成為口蹄疫的疫區。之後，每年均有零星口蹄疫個案發生。本研究係將 2009 年及 2012 年各一株親豬源口蹄疫病毒臺灣分離株分別與 1998 年疫苗株比較其 VP1 核酸序列及其抗原相關性。結果顯示 2009 年及 2012 年臺灣分離株病毒之 VP1 核酸序列與 1998 年疫苗株病毒之相似性分別為 90.8%與 89.8%；而與 1998 年疫苗株之抗原性 r1 值分別為 0.52 與 0.32。顯示親豬源口蹄疫病毒臺灣分離株已逐年變異，需密切監測口蹄疫病毒之病毒核酸變異程度與其抗原性 r1 值，以供防檢局擬訂防疫策略之參考。

Comparison of the isolated porcineophilic Foot-and-Mouth Disease Virus in Taiwan

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Abstract

Unfortunately, Taiwan has a devastating outbreak of FMD in March 1997. Since then, the epidemics have been controlled very well; due to the massive vaccination have been performed. Taiwan gained the recognition of an FMD-free country with vaccination by the O.I.E. on May 22, 2003. In order to meet the OIE requirements for an FMD-free country without vaccination, in total five stages have been implemented for the Staged Stopping Vaccinating Policy in pigs since April 1, 2007. However, in February 2009, outbreaks of FMD were reported from two pig farms located at Yun-Lin County and Chang-Hua County respectively. Consequently, Taiwan becomes a FMD infected country again. After that, a sporadic case was found every year. This study is to compare the VP1 sequence and antigenicity of porcineophilic FMDV isolated in Taiwan in 1998 with that in 2009 and 2012 respectively. The results shown that the similarity of VP1 sequence between 1998 isolate and 2009 isolate is 90.8%; between 1998 isolate and 2012 isolate is 89.8%. Furthermore, the r_1 value of antigenic correlation between 1998 isolate and 2009 isolate is 0.52; between 1998 isolate and 2012 isolate is 0.32. It demonstrated that the variation of porcineophilic FMDV isolates has occurred year by year in Taiwan. To be the reference of making a control measure for BAPHIQ, the surveillance of viral genetic variation and viral antigenic r_1 value of FMDV must been implemented.