



VIRAL DISEASES

VVD-045

INFLUENZA A SURVEILLANCE IN THE PIG POPULATION OF GREAT BRITAIN (1991-2017)

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Introduction

Swine influenza is an economically important viral disease of pigs, representing a continuing threat to production animals and zoonotic risk for humans.

Material & Methods

In Great Britain (GB), a scanning surveillance programme for swine influenza A virus (swIAV) began in 1991 including epidemiology and virological analyses, this has been augmented by phylogenetic and antigenic characterisation.

Results

From 1991-2017, 3862 swIAV submissions have been tested (range 27-275 *p.a.*), totalling 513 positive submissions producing approximately 635 virus isolates. Four main sub-types have been detected with 2-4 co-circulating: avian-like (av) H1N1 (n=232, 45.2%), H1N2 (n=73, 18.2%), H3N2 (n=29, 5.6%) and latterly pandemic H1N1 (n=77, 15%). Since 2010, the number of reassortant H1N2 viruses containing an H1N2 (external gene) – pandemic H1N1 (internal gene) has expanded. Frequency of detection of avH1N1 has declined since the initial identification in 1992 (23% to <1% of submissions) and whilst the rate of detection of H1N2 peaked in 1998 (9.8%), it declined to <1% in 2007/2008 but has increased again since 2009 (~5%). The pandemic H1N1 sub-type appeared in 2009, peaked in 2010 (~8%) and now comprises <5% of submissions. Sub-type H3N2 has not circulated in GB since 1997. Classical swine H1N1 was detected during the late 1980's but not after 1993. Demographic analysis of two subsets of submission data (1998-2006 and 2009-2012) has been performed including; frequency of swIAV submissions and virus positives per pig population, geographical distribution, seasonality, pig age, clinical signs and inter-current disease.

Discussion & Conclusion

Surveillance is needed for detection of existing and novel swIAVs in GB pigs and monitoring of prevailing disease trends. Such analyses may identify changes in the epidemiology of swIAV of relevance to public and veterinary health with respect to zoonotic and reverse zoonotic transmission, as well as to the burden of disease for the pig industry.