

Equine Veterinary Journal Ltd

Editorial

Worrying News from New York

September/October 2000

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Many will have been surprised by the recent news that the New York authorities took the unusual step of closing Central Park in order to spray it with insecticide, on grounds of public health. Surveillance of wild bird carcasses had confirmed the presence of the West Nile virus (WNV) which had caused deaths in humans, horses and birds in the North Eastern United States during 1999. Its presence confirmed the virus' ability to survive the New York winter. This arthropod-borne flavivirus is transmitted by mosquitoes who acquire infection by feeding on viraemic birds. Mosquitoes are commonly active at this time of the year in many parts of the world and a New York 'concert in the park' was cancelled to the disappointment of its supporters and organisers.

WNV was first identified in Uganda in 1937 and has since caused disease in humans throughout Africa, the Middle East, western Asia and Mediterranean Europe, with outbreaks recorded in Morocco and Romania in 1996 and in Russia in 1999. Between August and November 1999, 60 cases of WNV encephalitis were confirmed in the Long Island area of New York, with the peak occurring during late August. Seven elderly patients died. Equine outbreaks were recorded in Morocco in 1996 and in Italy in 1998. Between August and October 1999, approximately 20 horses, also located in the Long Island area of New York, on 13 different premises within a 5 mile radius developed WNV encephalitis, with the peak occurring in mid-September. The horses were of 10 different breeds and were aged between 3 and 30 years although the majority were 20 years old or older. Signs were of incoordination, depression and recumbency and approximately 10 died or required euthanasia. Initially, it was assumed that the horses were suffering from Equine Protozoal Myeloencephalitis (EPM). Two cases of WNV encephalitis were confirmed at Belmont Park racetrack. There is no specific treatment for WN virus infection, either in humans or horses, although most recover with symptomatic and supportive treatment. No vaccine is currently available and prevention can only be by avoiding exposure to infected mosquitoes.

Until recently and within living memory, the developed world enjoyed a relaxed attitude to potentially-fatal zoonotic diseases. However, relatively recent experiences with human disease associated with the prion conditions Bovine Spongiform Encephalitis (BSE) and new-variant Crutzfeldt-Jacob disease (CJD) and with infections caused by the bacterium *Escherichia coli* 0175 and methicillin-resistant *Staphylococcus aureus* (MRSA), heightened by the associated media coverage, have changed public attitudes to disease risk, probably permanently. Veterinary surgeons involved with horses have had even fewer serious zoonotic diseases to worry them. News of human/equine encephalitic infections caused by the Hendra, Getah, Nipah and now West Nile viruses suggest that this may not remain the case.

It appears that the WN virus is now widely found in the mosquito and wild bird population of the North Eastern United States. The source of the infection remains unknown but it is suspected that it entered USA with an illegally imported bird or birds. Experience suggests that clinical disease, with signs of paralysis, recumbency and mortality, occurs infrequently in horses. In an outbreak, only a few horses become viraemic and only at a level which is considered to be too low to infect mosquitoes. There is no evidence to suggest that the virus can be transmitted directly from horse to horse or from horse to human, so mosquitoes are the vectors for all species and wild birds are the reservoir hosts.

No movement restrictions have been placed on horses within the United States, but several other countries, including the European Union, have done so. There is no doubt that the ever increasing global movement of horses presents an increasing disease risk.

We live in a time of great public concern about health risks and it is important that we must all become sufficiently well

informed in order to maintain surveillance and help allay the fears of our clients. In the mean time, colleagues who have tickets for concerts in Central Park are advised to check with the organisers before leaving home!

Recent information from the State of New York Department of Health reports that as of 1st September, the states of New York, New Jersey, Connecticut, Massachusetts, Rhode Island and New Hampshire have all reported identifications of WNV over the summer months. The virus has been reported most frequently in dead birds and mosquitoes, as a result of an extensive surveillance program. During the month of August, nine human (eight in New York and one in Jersey City) and two equine cases were reported. The equine cases were a 26 year-old gelding on Staten Island, New York and a horse in Bedford, Massachusetts. Euthanasia was performed in both cases.

Further reading:

Church, S.L. (2000) West Nile is Back, *The Horse*, May, pp12-13.

Powell, D.G. (2000) Commentary and An Unwelcome Visitor, University of Kentucky, College of Agriculture, Department of Veterinary Science, *Equine Diseases Quarterly*, January, pp1-4.

Timoney, P.J. (2000) The Significance of Emerging Diseases, *The Horse*, May, pp39-44.

Relevant Web Sites

Centre for Disease Control and Prevention:

www.cdc.gov/ncidod/dvbid/arbor/arboinfo.htm

www.cdc.gov/ncidod/dvbid/arbor/West_Nile_QA.htm

www.cdc.gov/od/oc/media/pressrel/r990924.htm

USGS National Wildlife Health Centre:

www.umesc.usgs.gov/nwhhome.html

www.usgs.gov

