Australian Government
Department of Agriculture, Fisheries and Forestry

Emergency Animal Disease Newsletter

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New Viruses

In the past few months a number of reports have been published detailing the discovery of new viruses in animals.

Canine hepatitis C virus

A recent early report of the discovery of a novel hepatitis C-like virus in dogs indicates it is the most genetically similar animal virus to human hepatitis C virus. Studies indicate divergence of the human and canine viruses 500-1000 years ago.
http://www.mailman.columbia.edu/academic-departments/centers/discovery-canine-hepatitis-c-virus-opens-new-doors-research-deadly-huma

Novel bluetongue virus - Kuwait

In May 2011 CDC published a report on the characterization of a novel bluetongue serotype isolated from sheep in Kuwait in 2010. It caused only mild clinical signs in the sheep. It is proposed to call the new serotype BTV-26, given BTV-25 was detected in goats in Switzerland in 2008.
http://www.cdc.gov/EID/content/17/5/886.htm

Severe Fever and Thrombocytopaenia Syndrome (SFTS) bunyavirus - China

Outbreaks of illness in humans in China's Hubei and Henan provinces in 2009 were characterized by severe fever and thrombocytopaenia. Recent reports indicate the cause to be a novel phlebovirus of the bunyavirus family, which includes Rift Valley fever. The virus was isolated from *Haemaphysalis longicornis* ticks collected from dogs, but the reservoir species is yet to be identified.
http://www.nejm.org/doi/full/10.1056/NEJMe1102671#

Titi monkey adenovirus

In Issue 1, Vol. 5 of this newsletter we reported on a novel adenovirus which caused pneumonia and high mortality in a Titi monkey colony and infected a scientist. Subsequently two family members of the scientist were also affected. Adenoviruses were thought to be species specific, but recent surveys of human blood donors in areas where monkeys are endemic have found antibodies to both New World and Old World monkey adenoviruses.
http://www.ucsf.edu/news/2011/07/10203/ucsf-confirms-first-known-adenovirus-cross-species-barrier

Bokeloh bat lyssavirus

Bokeloh bat lyssavirus was isolated from a Natterer's bat in Germany. It was differentiated from other lyssaviruses on reaction to monoclonal antibodies.
http://www.cdc.gov/ncidod/EID/upcoming.htm

Cavally virus

Cavally virus, the first insect associated nidovirus, was isolated from mosquitoes in Cote d'Ivoire. It was isolated from mosquitoes in settlements close to recently disturbed rainforest.
http://mbio.asm.org/content/2/3/e00077-11

Avian bornavirus in geese and swans in Canada

Avian bornavirus has been identified as the cause of proventricular dilation in psittacine birds. In 2009 Canadian scientists isolated a new genotype associated with non-suppurative inflammation of the central, peripheral and autonomic nervous systems of wild Canada geese and trumpeter swans. Retrospective analysis of tissue specimens indicate the virus was present since at least 1992 in wild waterfowl.
http://veterinaryrecord.bmj.com/content/169/4/108.1.htm

Bagaza virus

In September 2010 many partridges and pheasants died near Cadiz, Spain. Bagaza virus, a flavivirus found in Culex mosquitoes in sub-Saharan Africa and India, was isolated from these birds. In Spain the clinical signs seen in the birds were weakness, prostration, lack of motor coordination, weight loss and diarrhoea. The virus is related to Israel turkey meningoencephalitis virus.
http://www.cdc.gov/eid/content/17/8/110077.htm#cit

BYD flavivirus

In Issue 3, Vol. 5 of this newsletter we reported on the syndrome of egg drop, retarded growth and deaths in ducks in China and Thailand caused by BYD virus, which is closely related to Tembusu virus. Further work has revealed another virus, Tembusu virus Fengxian 2010 (FX2010). It is now believed that BYD and FX2010 are newly emerged virus strains of Tembusu virus which cause disease in ducks. FX2010 is unusual as it is a flavivirus that can be transmitted without a mosquito.
http://www.sciencedirect.com/science/article/pii/S0042682211002674

REMEMBER

New diseases do occur. You may be looking at the first case.

EMERGENCY DISEASE WATCH HOTLINE 1800 675 888

Glanders

In previous issues of this newsletter we have reported on recent outbreaks of this old zoonosis.

Between 1998 and 2007 cases were reported from Brazil, Eritrea, Ethiopia, Iran, Iraq, Mongolia, Turkey, former USSR and United Arab Emirates (UAE). Since 2008 cases have been reported in Afghanistan, Brazil, India, Iran, Lebanon, Mongolia, Myanmar and suspected in Ethiopia and Mauritania. Most were the result of movement of horses.

The 2010 report of the OIE mission to Bahrain, Kuwait and Syria is available at: http://www.oie.int/en/for-the-media/press-releases/detail/article/glanders-poses-a-serious-health-risk-to-both-animals-and-humans-in-the-middle-east

In November 2010 at the 27th Jena Symposium "Horse – Orphan infectious diseases", Dr. Ulli Wernery, Scientific Director of the Central Veterinary Research Laboratory for the United Arab Emirates, gave a presentation entitled "A pictorial guide on equine glanders". It can be accessed at:

http://www.fli.bund.de/fileadmin/dam_uploads/Tagungsarchiv/Jenaer_Symposium/Wernery_Pictoral_guide_on_Equine_Glanders.pdf

Dr. Ulli has kindly allowed us to reproduce some of his photographs here. I recommend that those interested view the presentation in full.

Farcy – lesions along the lymphatics on legs

Internal lesions

Internal lesions

Recent reports from the UAE indicate that a competitive ELISA test and a Western blot analysis has improved the specificity and reduced the number of false positive results associated previously with the complement fixation test. Work still needs to be undertaken to validate these tests before they are adopted by OIE and included in the Terrestrial manual.

Bovine Neonatal Pancytopaenia

Bovine neonatal pancytopaenia (BNP) was first recognized as a cause of calf deaths in the EU in 2007. In June 2010 Pfizer Animal Health announced a voluntary withdrawal from sale of its PregSure BVD vaccine, due to an association between this condition and use of the vaccine. The vaccine was withdrawn in EU. It is believed that the syndrome is caused by alloreactive antibodies induced by the vaccine and transferred to the calf in colostrum. Only a small proportion of calves born to vaccinated dams are affected.

In August 2011 it was reported that a similar condition was occurring in calves in New Zealand following use of PregSure BVD vaccine. Pfizer subsequently withdrew the vaccine from sale in NZ.

http://www.ncbi.nlm.nih.gov/pubmed/21605614

http://veterinaryrecord.bmj.com/content/168/24/628.1.full

Arboviruses in USA

Given the wet weather earlier this year in USA many arboviruses are being reported, often beyond their normal range. They have included West Nile virus, eastern equine encephalitis (including first recorded case in Vermont in an emu) and epizootic haemorrhagic disease (EHD) in deer. Midges spread by wind (hurricane Irene) have carried EHD as far north as Michigan, New Jersey and British Columbia this year. Deaths have occurred mainly among white-tailed deer and pronghorn antelope.

Johnes disease in rabbits

Mycobacterium avium paratuberculosis (MAP) can affect non-ruminants. A study in southern Spain revealed 2.5% of wild rabbits were positive on serology and 2/80 rabbits had lesions consistent with MAP with the presence of MAP confirmed in one rabbit on isolation.

http://www.sciencedirect.com/science/article/pii/S0034528811000154

STOP PRESS

AUSVETPLAN

Recently Animal Health Australia has published updated versions of the Wild Animal Response Strategy and the Pig Industry Enterprise Manual. They can be accessed at the web address below.

FMD Response Policy Review

Australia's fundamental policy position – **eradication without ongoing vaccination** – has not changed but the response strategy to an incursion of FMD is currently being reviewed. Stakeholder comments are being sought on the revised draft of this disease strategy before progressing with the formal endorsement process. Further information on the draft revised FMD AUSVETPLAN Disease Strategy is available at: www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/ausvetplan/fmd-response-policy-review/

Further information on emergency animal diseases can be obtained from the AUSVETPLAN website at: http://www.animalhealthaustralia.com.au
While you are there check out the latest edition of Animal Health Surveillance Quarterly for information on diseases in livestock in Australia.

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