



EXOTIC ANIMAL DISEASE NEWSLETTER

Diseases out of Africa

Volume 1, Issue 2

July 2007

Peste des petits ruminants

This disease is caused by a Morbillivirus which is closely related to rinderpest virus; both viruses are in the Paramyxoviridae family. It is a disease of sheep and goats, although there are reports of mild disease in young cattle. This disease was previously reported only from Africa.

The disease has recently occurred in Bahrain (2004), Afghanistan (2005), Iran (2005), Oman (2005), Saudi Arabia (2005), Yemen (2005), Nepal (2006), Pakistan (2006), Palestine (2006), Turkey (2006), UAE (2006) and in August 2006 for the first time in Kenya.

Transmission is by direct contact with infected animals or contaminated fomites. The underlying requirement for transmission is a regular supply of susceptible hosts together with sufficient animal movement to allow mixing of the population. This occurs in the Arabian peninsula during the religious festivals.

Clinical signs include fever, severe depression, anorexia, nasal and ocular discharges and diarrhoea. Morbidity may approach 100% whilst mortality may vary from 4 - 90%, depending on age and immune status.

Whilst this disease could have a major

impact on Australia's livestock industries, Australia has restrictions on the importation of live sheep and goats from affected areas.

African swine fever

In May 2007 the veterinary authorities in Georgia in Europe advised OIE of the occurrence of wasting disease in young pigs which was initially attributed to porcine circo virus type 2.

Further testing at the OIE reference Laboratory Pirbright, UK confirmed in June the presence of African swine fever, caused by a unique virus that shares characteristics with both pox viruses and iridoviruses. **Outbreaks had been reported at 26 sites in 10 regions across the country.** By mid June 52 of 65 districts were suspected to be affected, more than 30,000 pigs had died and 22,000 pigs had been culled. FAO are arranging international assistance. The major difficulty facing authorities is to ensure that the disease does not enter the local wild boar population. Most of Georgia's pigs are kept on small farms with access to open grazing.

Whilst in Africa the disease is maintained in warthogs and ticks, outbreaks in other countries are usually associated with swill feeding.

The source of the infection has not been determined, but waste from ships in the port of Poti on the Black Sea or imported frozen or processed pig meat may have been fed as swill. Quarantine, stamping out, movement controls and controls over swill feeding are being undertaken. ASF was last reported in Europe in Portugal in 1999 and parts of Italy in 2005. The disease is usually restricted to Africa.

Lumpy skin disease

Lumpy skin disease, caused by capripox virus, is present in many African countries. It is spread by biting insects. In countries where the disease is endemic, control is by vaccination.

Since the 1980s LSD has spread northwards to Egypt, Oman, Kuwait, Lebanon (1993), Yemen (1995), Bahrain (2003) and Israel (2006).

The outbreak in Israel in June 2006 was in a dairy herd. Control measures undertaken included quarantine, modified stamping out, arthropod control measures and ring vaccination with a live attenuated sheep pox vaccine.

In early 2007 reports were received that a large epizootic was occurring in Zimbabwe and Zambia. It was reported that vaccines were in short supply in those countries.



Further information on these diseases can be obtained from the AUSVETPLAN website at:

<http://www.animalhealthaustralia.com.au>

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IT'S YOUR HEALTH

In the last edition we carried a warning about Hendra virus. The case in NSW was a salutatory warning **not to ignore diseases as a differential diagnosis** because “they do not occur in my area” and secondly to ensure that we apply the necessary **precautions when we undertake examination and specimen collection** procedures from unusual cases. You may find the following notes of interest.

Rabies

Rabies was reported as the cause of death of more than 200 people in China in the month of May 2007. In Beijing in 2006, 140,000 humans were treated for dog bites and 12 people died of rabies. Recently 21 people in Canada were treated following the unusual diagnosis of rabies in a cat, that was thought to have had exposure to a bat.

When an owner reports a recent change in temperament in their pet, don't discount rabies in your differential diagnosis as terrestrial rabies does not occur in Australia.



Whilst Australia is free from terrestrial rabies, lyssavirus has been reported in all eastern mainland states, Northern Territory and Western Australia. It has been found in all four pteropid fruit bat species and the yellow bellied sheath-tail insectivorous bat. Less than 1% of wild caught bats are infected, but a large proportion of the yellow bellied sheath-tail bats have been found to have antibodies to lyssavirus.

**Do you handle injured/sick bats in your practice?
Are you and your staff vaccinated against rabies?**

Melaka virus — a new zoonotic virus from bats

In June staff from AAHL, Malaysia's National Public Health Laboratory and the Australian Biosecurity Cooperative Research Centre for Emerging Infectious Diseases reported a reovirus that causes fever and respiratory disease in humans. Melaka virus was isolated from a man suffering from fever and acute respiratory symptoms. One week later two of his family developed similar symptoms and were serologically positive for Melaka virus.

The family had been exposed to a bat in their house one week before the man became ill. Melaka virus is closely related to Pulau virus, which was isolated from pteropid bats on Tioman Island in Malaysia in 1999. Retrospective testing of human sera from Tioman Island residents indicated that approximately 13% of those surveyed had antibodies to Melaka virus. Melaka virus is serologically not related to the mammalian reoviruses that are known to infect humans asymptotically.

A number of viruses that have recently

emerged from bats (Hendra, Nipah, Menangle) display a wide host range. This may be because bats, which are among the most ancient mammalian species, may have coevolved with these viruses, that use cell-surface receptors that are conserved across a range of animal species.

This is further evidence that bat borne viruses can infect humans and cause disease. Those handling bats or exposed to bats should take reasonable precautions.

Masks

There has been much discussion in the literature recently concerning the protection offered by face masks for the prevention of diseases such as influenza. A review in the April 1 issue of *Lancet Infectious Diseases* concluded that most of the evidence supports flu being acquired within a short distance of an infected person, indicating the virus is spread by large respiratory droplets rather than fine aerosols. So do we need face masks (surgical masks) or fitted respirators of P2 or N95 standard when dealing with diseases such as avian influenza?

A paper prepared for Animal Health Committee based on trials in NSW and Queensland recommended the use

of fitted masks containing a valve, particularly for those undertaking strenuous tasks. Queensland recommended the use of P3 self breathing full face masks with filter cartridge for use in “hot” areas such as infected poultry sheds



P3 self breathing full face mask

and P2 half face, disposable respirators for less risky tasks such as surveillance activities.



P2 half face, disposable respirator