

Anonymous A case of spongiform encephalopathy in a cheetah. Veterinary Group Newsletter : 8-9.

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Abstract: Short history of the first recorded case of spongiform encephalopathy in a cheetah.

clinical signs, the animal deteriorates over a period of several weeks to over six months until either it dies or has to be destroyed. Most cases in the UK have occurred in dairy cows aged between 3 and 5 years.

There is currently no test to diagnose the disease in the live animal. Diagnosis is based on clinical signs, nutritional history, and post-mortem examination of the brain.

RISKS TO AUSTRALIA

Australia is free from scrapie and BSE. Given the nature of the disease, sporadic cases of BSE may occur in scrapie affected countries eg western European countries and North America. It is most unlikely, however, that BSE will occur in other countries to the extent it has in the UK due to the combination of factors almost unique to the UK. It is more likely that BSE will be detected at low levels only, if at all.

With increased awareness and greater surveillance there is also a greater chance that other, previously undetected, spongiform encephalopathies in other species will be found.

Australia's attitude to scrapie and, more recently, BSE, has traditionally been very conservative to protect the free national status. A conservative quarantine stance is considered necessary to provide adequate protection against disease introduction due to the insidious, transmissible nature of the diseases, the long incubation period, the absence of tests to detect incubating animals and the potential threat to Australia's export trade in ruminants and their products.

Significant international spread of scrapie or BSE is regarded as most likely to occur by use of contaminated biological products (vaccines, medicines etc. produced using materials derived from sheep or cattle) or stock-feeds. Australia has very strict import controls on both.

Spread may also occur by international movement of livestock. In recent years sheep and goats have only

been imported into Australia from flocks and regions certified free from scrapie for at least 10 years and had then to undergo a prolonged and comprehensive scrapie freedom assurance program before release of their progeny to Australian flocks. The importation of cattle and deer from countries with BSE is banned. The scientific evidence to date suggests the risk of introducing BSE with semen or embryos is negligible but, until we are more certain of this, semen and embryos of susceptible species will not be permitted entry from infected countries.

If BSE was to enter Australia it would most likely present as one or a few sporadic cases directly linked to live cattle imported from the UK. Because of the absence of risk factors in Australia, spread of the disease would not be expected. The Commonwealth Government's Foreign Diseases Unit has developed a contingency plan for dealing with an incursion of BSE, unlikely though it is.

Australian veterinary authorities have identified the ownership and location of about 92% of the 2000 cattle imported from Europe and North America since 1982. All but 6 of the cattle imported from BSE affected countries have been successfully traced. No evidence of BSE has been found. Owners are required to report the death of, or any unusual sickness in, any of the cattle, and also to report their sale.

The world situation in respect of BSE and the other spongiform encephalopathies is being constantly monitored and Australia's import and disease control policies are under continual review.

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A CASE OF SPONGIFORM ENCEPHALOPATHY IN A CHEETAH

NATURE OF THE SPONGIFORM

ENCEPHALOPATHIES

The spongiform encephalopathies (SEs) are fatal degenerative diseases of the central nervous system of a variety of animal species and humans. They are not readily spread through contact.

These diseases are believed to be caused by atypical slow viruses. The agents are not highly infectious and propagate very slowly in the host, hence the long incubation period (the time from when the animal becomes infected until it first shows disease signs) associated with these diseases.

The principle SEs in animals are bovine spongiform encephalopathy (BSE) in cattle and scrapie in sheep and goats. Australia is free from both of these diseases. Other spongiform encephalopathies include transmissible mink encephalopathy (TME), chronic wasting disease of captive deer and elk, three very rare diseases in humans - Cruetzfeldt-Jacob disease (CJD), kuru and Gertsmann-Stressler syndrome, and the spongiform encephalopathies recently seen in some other animal species. All cause similar symptoms and victims have very similar brain damage.

Nineteen cases of SE have been confirmed in cats in the UK in the last 3 years. There is as yet no proven link between the disease in cats and spongiform encephalopathies in other species; the disease may have been present in the cat population for some time and not previously recognised.

Where this disease has been shown to be naturally transmitted, mother to offspring transmission and/or infection by mouth by very high doses are the accepted means of spread. There is no scientific evidence to link BSE, scrapie or any of the animal SEs with the similar human conditions despite considerable research into this subject.

HISTORY OF THE CASE

On May 9, 1989 a male cheetah (the affected animal) was imported from Marwell Zoo, Hampshire, in the United Kingdom into Pearl Coast Zoo,

Broome WA. Two littermates, one female and one male were imported at the same time. The three animals were born at Marwell Zoo on June 16, 1986.

In December 1991 the cheetah showed considerable signs of illness which worsened over a three-week period. On January 7, 1992 the animal was euthanased and a diagnosis of spongiform encephalopathy has now been confirmed.

This is the first recorded case of SE in a cheetah. There is evidence linking this case to the feeding of contaminated feed in the UK. Based on this and the fact that the known transmissible SEs affecting animals are exotic to Australia, it has been concluded that the affected cheetah acquired the disease while residing in the United Kingdom prior to its importation into Australia.

As natural transmission from the live animal occurs rarely if at all, and as all animals in registered zoos in Australia are kept under conditions of quarantine security, there has been no potential for spread from this animal to Australian wild, native, domestic or commercial animals. The occurrence of SE in an imported zoo animal has no practical significance to public, environmental or animal health in Australia. There are no scientifically established links between the SE of animals and those affecting man.

SIGNIFICANCE TO AUSTRALIA

Australia is free from scrapie and BSE. The cheetah in the WA zoo is the first animal diagnosed as having a spongiform encephalopathy since scrapie was found in, and eradicated from, some imported sheep in 1952.

Given the nature of these diseases, sporadic cases of spongiform encephalopathies may occur. With increased awareness and greater surveillance, there is also a greater chance that other, previously undetected, spongiform encephalopathies in other species will be found, most probably in animals imported from the UK which had been fed ruminant derived

protein material prior to their export, as in the case of the cheetah in WA. Australia's attitude towards scrapie and, more, recently BSE has traditionally been very conservative to protect our free status. A conservative quarantine stance is considered necessary to provide adequate protection against disease introduction due to the nature of these diseases. The world situation in respect of all the spongiform encephalopathies is being constantly monitored and Australia's import and disease control policies are under continual review.

AQIS (Australian Quarantine and Inspection Service) Department of Primary Industries and Energy

BLUE-EARS IN PIGS

No! Not the name of a children's book, but a new disease first recognised in Germany in November 1990. It has since spread to other European countries.

Up until the end of March 1991, there have been about 2,500 outbreaks in Germany, 1,000 in Netherlands, 12 in Belgium and 2 outbreaks in UK. Originally associated with the movement of pigs, there is now evidence of airborne spread. Meat and other pig products are not implicated.

On the 18th June 1991, the Minister of Agriculture UK, sent out guidance notes on Blue Ear disease to vets and farmers. The description is of a mild influenza type disease lasting 1 - 3 weeks. The symptoms include Pyrexia, Anorexia and Cyanosis of the extremities, although these are not consistent findings in all cases. There may be an increase in still births and litters of live and dead piglets and mummified fetuses occur. It can also cause abortion. Some, and by no means all, affected pigs have blue ears and other extremities. The infective agent appears to be a virus isolated by the Central Veterinary Institute in Netherlands has now been called Leystad Agent.

BLUE-EARED PIG DISEASE

The Ministry of Agriculture, Fisheries and Food has confirmed an outbreak of Blue-Eared Pig Disease in northern England as of June 13. Twelve farms were involved.

Movement of pigs was restricted within a wide zone around the infected farms in the Humberside area in order to try to limit its spread. The Ministry also laid down requirements about the destruction of infected material, and the cleansing and disinfection of premises.

As of July 1, John Gummer, Minister of Agriculture, Fisheries and Food announced changes in the movement restrictions on pigs on unaffected farms within areas subject to such restrictions because of blue-eared pig disease.

Unaffected premises which are more than 3km away from suspected or confirmed cases of the disease will be able to move weaner and store pigs out of the restricted zones, but only under strict licensing conditions.

The pigs will be inspected by a veterinary officer immediately before they are moved. The receiving premises will also be inspected to ensure that there are no breeding pigs on the premises or on any pig units within 1 kilometre. The receiving premises will be placed under movement restrictions limiting movements of pigs going for immediate slaughter until all the introduced stock have been slaughtered.

Germany and the Netherlands have agreed to a resumption of the trade in live pigs from some areas in this country currently under blue-eared pig disease restrictions.

All consignments of pigs exported to other Member States will have to be accompanied by supplementary veterinary certification confirming compliance with the provisions of EC Decision 91/237.

This means that exports may take