

Suspected exotic disease investigations

The following is a summary of the suspected exotic disease investigations carried out by Ministry of Agriculture laboratory and field staff and Alpha Scientific Ltd staff during the January to March 1997 quarter. A summary of the investigations performed in the past 7 years is presented in Table I.

Anthrax suspected

A portion of spleen was submitted from a yearling cattle beast that had died suddenly, and had a bloody exudate from the nose when examined 1 hour after death. A smear from the spleen had occasional Gram-positive rods, but no capsulated bacilli were detected. Cul-

ture produced a moderate growth of mixed coliforms and a light growth of a *Bacillus* species, which was not *B anthracis*.

Avian pox in albatross chicks

Six to ten royal albatross chicks, 2 to 3 weeks old, had raised yellow soft lesions around the eyes and bill. The differential diagnosis included avian poxvirus infection. Scab samples were examined by electron microscopy and proved positive. There have been anecdotal reports of avian poxvirus in wild birds in the past.

Bovine spongiform encephalopathy suspected

A 2-year-old cow exhibited neurological signs for a few days including "strange

behaviour" and was "hanging back" from the herd. She collapsed in the tanker track and died soon after. The head was taken to the laboratory for examination. No evidence of bovine spongiform encephalopathy was seen in sections of the brain and the cause of the neurological signs was not diagnosed.

Brucella abortus reactivity

Two deer which were being prepared for export had suspicious reactions in the *Brucella abortus* SAT, which resulted in a follow-up investigation. Both animals were rebled and retested with the SAT and the SAT after Rivanol treatment, and the results were negative. Faecal cultures were negative for *Yersinia enterocolitica* serotype O9.

Suspected human brucellosis in Wanganui

Continued from page 24

were traced and serologically tested using the *B. abortus* CFT. The test results were negative. The cattle were then, for reasons unrelated to this investigation, sent for slaughter within 14 days of testing. The results from the Wellington reference laboratory were received on 17 July and are presented in Table I.

Laboratory tests	29 June 1995	17 July 1995
<i>B. abortus</i> SAT	1/1200	1/320
<i>B. melitensis</i> SAT	1/640	
Coombes test		1/640
<i>B. abortus</i> CFT		1/16
<i>B. abortus</i> SAT post-treatment		
2-mercaptoethanol		1/1280
Leptospirosis titres		negative
<i>Y. enterocolitica</i> culture		positive
<i>Brucella</i> culture		negative

The *Yersinia enterocolitica* isolate was serotyped as O:9 by the Department of Veterinary Pathology and Public Health, Faculty of Veterinary Science, Massey University. This serotype is recognised as cross reacting with *B. abortus*. The child responded to a 6-week course of cotrimoxazole.

Acknowledgements

I thank the parents of the child for permission to publish this information, and acknowledge the assistance of the members of the medical profession who managed the case.

Michelle Young
MAF Quality Management
Wanganui
Email: youngm@wanganui.mq.govt.nz

Table I: Accumulative report on suspected exotic disease investigations from 1990 to March 1997 with detailed figures since 1993

Diseases investigated. Confirmed as negative	1993	1994	1995	1996	1997	Total
Anthrax	1	2		1	1	10
Arbovirus infection	3	2	2	2		11
Aujeszky's disease			1	2		4
Babesiosis	1	1	2			4
Bovine ephemeral fever				1		1
Bovine spongiform encephalopathy	10	14	6	11	1	62
<i>Brucella abortus</i> infection	20	2	4	4	1	37
<i>Brucella canis</i> infection	1	3	7	3	2	18
<i>Brucella suis</i> infection			1			2
Canine ehrlichiosis				1		1
Caprine pleuropneumonia		1				1
Chronic wasting disease - elk		1		1		3
Classical swine fever		1	2			4
Contagious agalactia				1		1
Cont. bovine pleuropneumonia		1				1
Contagious equine metritis		1		1		2
Digital dermatitis				1		1
Enzootic abortion - ovine	1	1	3	3		8
Equine infectious anaemia	1	3	3	3		11
Equine viral arteritis		1	1	1		7
European foulbrood	1	1	1	1		4
Feline ^(f) & canine ^(c) spongiform encephalopathy				1 ^f	1 ^c	2
Maedi-visna	1	1	1	1		4
Melioidosis		1				1
Myxomatosis						1
Newcastle disease	4	2	4	3		14
Porcine reprod & resp syn.		1	1	3		5
Rabies		1		1		7
Rabbit calicivirus			1	3	1	5
Scrapie		1	1	3		8
Teschen disease						1
Viral vesicular disease	12	15	16	6	1	78
Total	56	58	56	58	8	318
Exotic organisms investigated and confirmed	1993	1994	1995	1996	1997	Total
<i>Dirofilaria immitis</i>	3	1		2		7
Exotic dog and cat ticks	4	3	1	3		13
Total	7	4	1	5	0	20

Continued next page

Brucella canis suspected

A 7-year-old working dog was presented to a veterinary clinic with a high temperature and an enlarged, tender, left testicle. The dog had been in a fight a week previously. Treatment with antibiotics resolved the pyrexia and improved the dog's demeanour. However, the testicle remained enlarged and the dog was castrated. Suppurative epididymitis was seen histopathologically with Gram-positive cocci present. *Staphylococcus aureus* was isolated and *Brucella canis* culture was negative.

A mature, male German shepherd-cross dog was pyrexia, associated with sudden onset of heat, pain and swelling of the scrotum. Neutrophils were present in a fine needle biopsy from the testes, and histology showed a severe acute necrotising orchitis. The ELISA for *Brucella canis* was negative.

Pacheco's disease in quarantined parrots

Over 100 parrots recently imported to New Zealand and kept in a high security quarantine facility in Auckland area were under investigation due to the death of some of the birds. All the dead birds were in good condition, although a number of them had loose droppings for a few days before death. No gross pathology was observed, except for congestion of lungs and liver in some birds. Histopathological examination revealed a hepatitis with intranuclear inclusion bodies suggesting DNA virus infection. It was confirmed by electron microscopy. Herpesvirus was isolated from three birds using chicken embryo liver cells, and virus neutralisation using reference antiserum from Central Veterinary Laboratory, Addlestone, England, identified the virus as Pacheco's disease serotype 1 herpesvirus.

Rabbit calicivirus disease suspected

The owner of an orchard found a mature feral rabbit lying moribund beside the main driveway. There appeared to be a mucus discharge from the nostrils and within hours the rabbit had died. The orchardist was concerned about the possibility of rabbit calicivirus disease (RCD) because there had recently been two sets of English visitors on the orchard, one group arriving after having spent 5 weeks in Australia. The only findings at necropsy were mild generalised pulmonary congestion (likely hypostatic) and mild generalised reddening of the tracheal epithelium. Based on the absence of characteristic gross findings, and the involvement of only one rabbit, RCD was ruled out. Histologically there was mild to moderate, generalised congestion of the liver, lungs, spleen and tracheal submucosa. The cause of death was not evident.

Spongiform polioencephalopathy in a dog

A 3-year-old female pedigree Sheltie was presented with a 12 to 18-month-old history of progressive neurological signs, which included ataxia, loss of long vision, and behavioural changes. The animal was euthanased at the owners' request, due to the intractable nature of the disease. There was evidence of a mild non-suppurative meningitis and mild spongiosis of white matter in a few areas. The salient feature was the vacuolation of neurones in the mid-brain and brainstem, especially in the region of the thalamus. Due to these findings and the history of a progressive neuropathy, the possibility of a transmissible spongiform encephalopathy could not be ruled out. A second opinion sought from Weybridge pathologists concluded that this was a case of spongiform polioencephalopathy of unknown aetiology, but possibly metabolic or genetic. However, as the possibility of a "prion" disorder could not be entirely excluded, immunohistochemical examination for feline PrP protein was conducted, with negative results.

lopahy of unknown aetiology, but possibly metabolic or genetic. However, as the possibility of a "prion" disorder could not be entirely excluded, immunohistochemical examination for feline PrP protein was conducted, with negative results.

Vesicular stomatitis suspected

A 16-month-old Arab-cross filly on a farm near Christchurch had 2 mm diameter dry crusty lesions on the muzzle. These were chronic and the scabs lifted off easily. In the oral cavity on the gums and lateral buccal cavity there were 2 mm diameter raised miliary, fleshy, firm pink nodules. The MAF veterinary officer decided that these mouth lesions were probably due to a papilloma-virus infection, and that the muzzle lesions were probably due to *Dermatophilus* infection or a contact allergy.