

capsules

THE CURRENT LITERATURE IN BRIEF

Feline Dysautonomia: Mystery Solved?

Feline dysautonomia, first described by Key and Gaskell in the United Kingdom in 1982 (since known as the Key-Gaskell syndrome), has long been an enigma. The disease causes extensive autonomic nervous system dysfunction, and until now, the cause was unknown. Originally reported only in Europe, it has since been seen in many countries. In contrast, canine dysautonomia has been reported primarily in the United States. This study investigated the possibility that feline dysautonomia has the same cause as equine dysautonomia (grass sickness) and is the result of a toxic infection with *Clostridium botulinum* type C. Subjects were from an outbreak of the disease in a closed colony of 8 nonbreeding but related indoor cats (ages 5 to 14 years) in the United Kingdom. Control animals were 11 healthy outdoor cats (older than 2 years of age) from the same area. Of the 8 indoor cats, 6 were clinically affected with varying degrees of lethargy, vomiting, anorexia, dysphagia, constipation, urine retention, and bilateral pupillary dilatation. Of the 3 most acutely affected (three 5-year-old cats—2 females, 1 male), 2 died and 1 was euthanized in extremis. Postmortem diagnosis was made on 2 of these cats. Only 2 of the 8 indoor cats had no clinical signs, but follow-up radiography showed subjective evidence of reduced esophageal function. Recent exposure to the organism was detected by ELISA for immunoglobulin A in the feces of affected and healthy cats and was significantly higher in the affected cats 14 weeks after the outbreak. *C. botulinum* type C neurotoxin was detected in the feces, in the contents of the ileum, by serologic testing, and in the dry food of the affected cats, but not in the feces of healthy cats or their food. The toxin was detected directly in 4 of the affected cats, and after enrichment in 7 of them and in their dry food. The results of this investigation provide strong circumstantial evidence that the cause of this disease is *C. botulinum* type C, warranting further study of new cases.

COMMENTARY: The similarity of both canine and feline dysautonomia to equine grass sickness is striking. *Clostridium botulinum* toxin has been detected in horses with grass sickness, and as evidence accumulates, it is becoming increasingly apparent that dysautonomia is another manifestation of botulism. The isolation of *C. botulinum* type C toxin from a group of affected cats is the first concrete evidence that exposure to the toxin causes feline dysautonomia. The fact that the toxin was also isolated from their dry cat food makes cause and effect even more likely. The canine version of the disease may also turn out to have a similar cause.—*Colin F. Burrows, BVetMed, PhD, MRCVS, Diplomate ACVIM*

Association between Key-Gaskell syndrome and infection by Clostridium botulinum type C/D. Nunn F, Cave TA, Knottenbelt C, Poxton IR. VET REC 155:111-115, 2004.