

Quebec

***Actinobacillus suis* in swine in southwestern Quebec**

A retrospective study of *Actinobacillus suis* infections in pigs was conducted following an apparent increase in the incidence of this disease in swine herds in southwestern Quebec. This study was based on necropsy cases submitted to the diagnostic laboratory of the Faculté de médecine vétérinaire, Université de Montréal, from January 1991 to March 1993, inclusive. *Actinobacillus suis* infection was diagnosed in 36 of 2,971 pigs: 26 suckling, 8 weanling, and 2 fattening. In 1991, there was one case from 1,307 necropsies; in 1992, 15 cases from 1,509 necropsies; and in the first three months of 1993, 20 cases from 155 necropsies. All of the infected pigs were from minimal disease herds. Clinical signs included dyspnea, lameness, neurological signs, and non-specific signs of unthriftiness and fever. Half of the pigs were submitted with a history of sudden death.

Gross lesions were usually found in the thoracic cavity and included acute serofibrinous pleuritis and pericarditis, fibrinohemorrhagic bronchopneumonia, multifocal hemorrhagic pneumonia, and diffuse pulmonary congestion. Peritonitis and ecchymotic hemorrhages in kidneys, liver, spleen, or intestine were sometimes observed. Fibrinopurulent arthritis was present in 10 cases. The diagnosis was confirmed in all cases by the isolation of *A. suis* from tissue samples.

The main histological lesion was septic thromboembolic vasculitis with concurrent necrosis in the lungs, heart, kidneys, liver, spleen, intestine, or lymph nodes. The lung was the organ most consistently involved. "Oat cells", similar to those described in porcine pleuropneumonia, were sometimes observed in the lungs, as well as in other sites including kid-

neys, liver, lymph nodes, and intestine. The pulmonary lesions in severe cases of *A. suis* infection showed similarities to those observed with *A. pleuropneumoniae* infections, which suggested that similar virulence factors were involved (1). We did not observe necrotic foci with radiating, eosinophilic, club-like colonies, as described in a previous report (2). This lesion is typical of bovine actinobacillosis due to *A. lignieresii*, a bacteria biochemically close to *A. suis*, and is usually associated with subacute processes, which generally does not seem to be the case for *A. suis*.

The clinical and pathological characteristics of *A. suis* infections in Quebec are similar to those described in a previous report (2). The main differential diagnoses, according to the age of the pigs, are fibrinous polyserositis due to *Escherichia coli* in nursing piglets, and pleuropneumonia due to *A. pleuropneumoniae* and cutaneous erysipelas in weaned and older pigs (2). The reason for the recent increase in the diagnosis of this condition is not yet clear, but future trends will be observed.

References:

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2. Sanford SE, Josephson GKA, Rehmtulla AJ, Tilker AME. *Actinobacillus suis* infection in pigs in southwestern Ontario. *Can Vet J* 1990; 31: 443-447.

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Alberta

Blindness in captive reared pheasants

A pheasant breeding facility in Alberta with a breeding flock of 6000 birds and a total population of approximately 50,000 birds has experienced a problem with blind birds for several years. Blindness is not evident until about two weeks of age, after birds are able to fly, when blind birds are noticed with increasing frequency until the birds are allowed into outdoor pens at seven weeks of age. Most of the blind birds are culled as soon as they are detected, but those that develop blindness outside have difficulty locating feed and water and die from starvation and dehydration. The facility has been in operation for 15 years, and each year there has been a slight increase in the number

of birds culled for blindness. An estimated 3% to 5% of the birds hatched were affected this year.

Eight affected birds about nine weeks of age were selected for necropsy, because they would walk into objects and showed no blink reflex, and were submitted to the Animal Health Laboratories Branch, Airdrie, Alberta. The birds were euthanized, and their eyes fixed in Bouin's solution for 24 hours and then washed in 95% alcohol until clear. They were routinely sectioned, processed, and stained. Six birds had both eyes affected, two birds had one normal eye. Retinal detachment was evident grossly, with the retina folded in the vitreous. There were no other significant lesions in the birds, other than moderate loss of bodily condition.