CROSS-CANADA DISEASE REPORT

RAPPORT DES MALADIES DIAGNOSTIQUÉES AU CANADA

Ontario

Satelliting streptococci

During the last year, the Veterinary Laboratory Services Branch laboratory in Guelph recovered 16 isolates of satelliting streptococci (nutritionally deficient streptococci, nutritionally variant streptococci) from samples submitted from diseased animals. Table 1 briefly summarizes these isolations.

This group of organisms is receiving increasing attention in both human and veterinary microbiology. **They appear to be opportunistic pathogens that reside on a variety of mucosal surfaces. Their isolation from such sites, or from locations from which they may readily extend terminally or after death, should be interpreted with caution.** Isolation of these organisms from properly collected and transported samples from abscesses or from normally sterile sites, such as the mammary gland, may be considered to be of greater significance, particularly when these organisms are isolated alone. The addition of a staphylococcal feeder streak to bovine milk cultures which show no evidence of growth after 24 hours incubation is advisable as routine laboratory practice. As well as encouraging the growth of otherwise undetected satelliting streptococci, this procedure will also identify bacterial inhibitors (usually antibiotics) by growth inhibition of the feeder culture near the inoculum.

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Table 1. Sources of satelliting streptococci and isolates of other potential pathogens

Species	Specimen	Number	Other potential pathogens isolated
Bovine	milk	6	3 — none
			1 — *Nocardia* sp.
			1 — *Pseudomonas cepacia*
			1 — *Pseudomonas* sp., *Escherichia coli*
	lung	6	3 — *Pasteurella haemolytica*
			2 — *P. haemolytica. Actinomyces pyogenes*
			1 — *Pseudomonas aeruginosa*, mixed enteric organisms
	abscess (submandibular)	1	1 — *Bacteroides melaninogenicus*
Equine	abscess (submandibular)	2	1 — none
			1 — mixed anaerobes
Duck	heart	1	1 — *E. coli*

Saskatchewan

Prevalence of *Campylobacter jejuni* in pronghorns and mule deer in southern Saskatchewan

Staff of the Western College of Veterinary Medicine, Saskatoon and Saskatchewan Parks, Recreation and Culture conducted a survey to determine the prevalence of *Campylobacter jejuni* in pronghorns and mule deer in southern Saskatchewan. This study was undertaken to investigate the possible role of wildlife in the transmission of *C. jejuni* to beef cattle (1).

During the fall hunting season, October 26 to November 11, 1989, fecal samples were voluntarily collected by hunters from 101 pronghorns and 86 mule deer killed in the vicinity of Val Marie, Swift Current, Shaunavon, and Thompkins. From October 26 to November 11, 1989. Within 48 hours after collection, wildlife officers placed the fecal samples into Weybridge transport and enrichment media (2) and these samples were subsequently cultured on CCD agar.

Fecal samples were negative by culture for *C. jejuni*. These results suggest 1) that pronghorns and mule deer are not carriers, or 2) that there is a seasonal incidence of *C. jejuni*, or 3) that there was sampling error. Similar sampling techniques, however, have yielded positive culture results from bovine fecal samples.

Further surveys are required to determine the prevalence of *C. jejuni* in wildlife and their potential role in the transmission of this bacterium to domestic livestock.

References
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Alberta

Congenital storage disease of Salers calves

Storage diseases occur when there is an enzymatic defect or deficiency resulting in the "storage" of metabolites within cells. The clinical and pathogical findings depend upon the specific defective enzyme and its function (1). Salers cattle are a beef breed imported from France and are recognized by their dark red, curly hair coat. Ten newborn Salers calves affected with a storage disease have been submitted to the regional veterinary laboratories in Alberta. Clinically, affected calves are uable to stand at birth and have various neurological signs including head tremor, nystagmus and opisthotonos. Owners refer to the calves as "dummies" or "retarded". The calves often die from starvation or septicemia secondary to an inadequate intake of colostrum. **Pathologically, the findings on gross post-mortem examination are consistent and distinctive. Both kidneys are greatly enlarged (about five times normal) and are green-brown. The brain is soft and wet, and the gyri are collapsed. The thyroid gland may be enlarged.** Microscopically, many types of cells including neurons, renal tubular epithelial cells, thyroid follicular cells, and macrophages, are enlarged and contain vacuoles.

The enzymatic defect in the Salers calves has not been determined. The gross and histological findings in the calves were very similar and warrant recognition as a distinct disease of Salers calves. The Canadian Salers Association of Canada has been informed of this defect. Their members have been advised to have the diagnosis of storage disease in Salers calves confirmed by a veterinarian. Diagnosis requires recording the typical gross findings and microscopic examination of the kidney, brain (particularly cerebrum), and thyroid gland.

References
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British Columbia

An outbreak of aspergillosis in wild waterfowl

At the end of October, 1989, the Animal Health Centre in Abbotsford was notified by the Canada Wildlife Service of a sudden die-off of wild waterfowl in an agricultural area of the Saanich Peninsula on Vancouver Island. Media interest was keen and a spokesperson from the local SPCA had already stated publicly that the most likely cause of death was pesticide poisoning, although birds had not yet been examined by a veterinary pathologist. In all, 18 ducks (17 mallards and 1 pintail) were subsequently received and necropsied at the laboratory.

All birds were in poor body condition with moderate reduction in muscle mass and serous atrophy of fat stores. The digestive tracts were empty. All had severe bilateral granulomatous pneumonia and air sacculitis. Mycotic plaques were visible within the bronchi and lining the air sacs. There were no other visible lesions. A heavy growth of *Aspergillus sp.* was recovered on culture. Histopathological findings were typical of systemic aspergillosis and were characterized by a prominent generalized vasculitis and occasional thrombi in the heart, spleen, intestines and lungs. The entire lung was affected with severe lobular consolidation and granulomatous pneumonia associated with the presence of septate fungal hyphae.

Because of public pressure generated by the premature release to the media concerning the involvement of pesticides in the mortality, tissue and environmental samples were forwarded for toxicological analysis. There was no detectable level of polychlorinated biphenyls, organophosphates or chlorpyriphos in liver, kidney or gizzard content, and only negligible levels of mercury, lead, arsenic and organochlorines. Pesticide poisoning was eliminated based on these findings. During a 10-day period, an estimated 150 mallard ducks died in the outbreak. Environmental management procedures were limited to the daily collection and disposal of carcasses.

Aspergillosis in ducks is usually the result of inhalation of mold spores, most likely encountered during feeding on moldy feed or agricultural waste such as spilled grain or corn silage (1). In this situation, a survey of the immediate area revealed several fields of corn stover in which moldy cobs were easily seen.