

Ontario

Black cherry poisoning in an Angora goat

A 6 to 8-month-old Angora goat, weighing 22 kg, was submitted to the Veterinary Services Laboratory in Ridgeway in August 1994. The animal had died suddenly on pasture. Its pasture mate, a goat of similar age, was still healthy. The carcass was in good bodily condition. The lungs and spleen were moderately congested. **The rumen contained dry roughage with approximately 2 double handfuls of green pointed leaves and twigs mixed in with the contents of the rumen. The foliage was identified as black cherry.** On inquiry, the owner reported that there was a black cherry tree in the pasture, but he was unaware that it posed a risk to livestock.

Black cherry (*Prunus serotina*) is a tree native to eastern Canada, including Ontario, Quebec, New Brunswick, and Nova Scotia. It is an important timber tree and, at maturity, stands 18 to 20 m high, with some trees reaching 30 m. The leaves are dark green, slender, and pointed, with serrated edges. The leaves, twigs, and seeds contain the cyanogenic glycosides, prunasin

and amygdalin, which are toxic to all species of animals and humans (1). These glycosides are converted to hydrocyanic acid (HCN) by enzymes in the rumen (1). Hydrocyanic acid is a potent asphyxiant that inhibits such oxidative enzymes as cytochrome oxidase. On necropsy, the venous blood may appear bright red, because the oxygen in the arterial blood has not been utilized. The lethal dose of HCN for cattle and sheep is 2 mg/kg body weight (1). Leaves of black cherry contain 212 mg HCN/100 gm of fresh leaves (1). Twenty grams of fresh leaves would have killed this goat.

References

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Saskatchewan

Thrombocytopenia in weaned beef calves

Recently clinicians, microbiologists, and pathologists at the Western College of Veterinary Medicine (WCVN) have been examining weaned calves, placed in feedlots, with a condition that appears as a bleeding disorder. Several practitioners throughout the western provinces have contacted us and reported similar findings in groups of calves that they were called in to attend to.

Ten to 14 d after arrival in the feedlots, calves are selected for treatment because of depression and, in some cases, apparent blindness. Closer examination reveals that they are febrile ($>40^{\circ}\text{C}$). A characteristic feature common to all of these calves is that considerable bleeding occurs from injection sites for some time after treatment, often accompanied by large subcutaneous swellings. The blindness has been shown to be due to hemorrhage into the chambers of the eye. Preliminary laboratory examinations reveal that calves with this bleeding disorder are severely thrombocytopenic and neutropenic, in spite of an adequate regenerating bone marrow. This condition would appear to have some similar symptoms to a thrombocytopenic syndrome associated with bovine viral diarrhoea (BVD) infection (1,2).

Thus far, attempts to isolate a BVD virus from the buffy coat or the serum of suspected calves have been unsuccessful. Common necropsy findings are extensive ecchymotic hemorrhages throughout the entire carcass. These hemorrhages occur on the serosal surfaces of viscera, subcutaneously between the fascial planes, and within all muscle groups. Histologically, the only significant lesion, other than a mild to moderate suppurative bronchopneumonia, has been a lymphocytic and occasionally necrotizing vasculitis in several tissues of 2 calves examined. The peripheral lymph nodes were enlarged and edematous.

The morbidity was approaching 10% in one pen of newly-placed calves examined by the staff of WCVN. Most of these calves convalesced for 4 to 5 d and appear to have recovered. Some of the calves examined in greater detail revealed a hemogram that had returned to normal within 10 d.

Practitioners in western Canada have been aware of the fatal BVD in immunocompetent cattle that has been reported as occurring in eastern North America. Whether this syndrome of severe hemorrhagic diathesis is caused by the common BVD virus remains to be shown. Our purpose here is to point out that this syndrome is

occurring in western Canada and to encourage practitioners to thoroughly investigate any cases that they encounter.

We thank Mr. Cam Piprell and Tim Loos of the Golden Hill Cattle Co. Ltd., who identified these calves in the feedlot as being out of the ordinary; Dr. Gerry Mechor from Cornell University, who examined the calves initially; Drs. Hugh Townsend and Lyall Petrie, who followed up this examination in the Veterinary Teaching Hospital at WCVM; and Drs. Susantha Comis and Gene Searcy, who examined material in the laboratory.

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