Neonatal liver disease in beef calves, Spring 2022

Conclusion/takeaways

In the spring of 2022 a series of cases (N = 20) of rapidly fatal disease in neonatal beef calves were identified, with severe liver disease being the major cause of death. This unusual problem continues to be studied with both infectious (e.g. virus) and toxic (e.g. poison from moldy feed/ toxic plants) causes being investigated.

Background

Liver damage, especially widespread severe damage, is unusual to find in newborn beef

Case Histories:

Starting in February, 9 calves from 3 herds were seen, by University of Calgary (UCVM) faculty and the UCVM diagnostic laboratory (DSU). Clinically they showed some neurological problems (e.g. depression, neck extended, unable to stand) and tended to die within 24 hours of identification regardless of treatment.

All died at 1– 5 days of age. On post-mortem examination at UCVM, these calves all had widespread severe liver damage.

In April and May, 11 similar cases from 7 herds were identified at Prairie Diagnostic Services, again in calves 1-5 days of age, and also with severe liver damage as the major finding.

Summary of Calf Liver Disease Cases

Potential risk factors	UCVM DSU	PDS
Age	1-5 days	1-5 days
Sex	Equal proportion M/F	Equal proportion M/F
Breed	Hereford, Angus, Akaushi	N/R, Charolais, Angus
Calving date	Feb., March, April	April, May
Location	35-95 Km from Calgary	East central AB, west central/ southern SK
Feed	Unknown	Two herds fed US corn: aflatoxin?

UCVM DSU = University of Calgary Veterinary Diagnostic Services Unit

PDS = Prairie Diagnostic Services Unit

Study of the cases identified to date is ongoing, by diagnostic laboratories and veterinary college disease investigation units. Genomic DNA analysis is being performed on some of the case samples to further rule in or out an infectious cause. Stay tuned for follow-up as genomic and individual herd outbreak investigation findings become available.