International Dairy Topics

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Malignant Catarrhal Fever

Aetiology

Malignant Catarrhal Fever (MCF) has been seen in domesticated and wild ruminants worldwide. MCF is caused by a group of gamma herpesviruses and is a severe lymphoproliferative disease characterised by high fever, corneal oedema, mucosal erosions and lymph node enlargement.

Many ruminant species and pigs are susceptible to MCF and dairy herds have experienced losses from this disease. Wild ruminants, such as wildebeest, hartebeest and topi, are thought to be natural reservoirs for strains of the causal herpes virus. The virus is highly cell associated but can be spread at times of stress, such as parturition or shipping, and may be found in foetal fluids of wildebeest. When the virus is released from wildebeests it is infectious for cattle.

In other parts of the world, sheep appear to be the most likely reservoirs for this virus. Ovine herpesvirus type 2 has been isolated from domesticated ruminants with MCF and seroconversion to ovine herpesvirus type 2 has been seen on ELISA. Sheep associated MCF has been seen in cattle, bison, pigs, deer, elk and moose.

Most cases of sporadic or epidemic MCF in bovines have been associated with a proximity to sheep. In North America the infection is widespread in sheep but virtually always asymptomatic. It is also thought that asymptomatic ovine herpesvirus type 2 can occur in cattle and these animals may develop into clinical cases of MCF. Therefore, it is difficult to define the incubation period for MCF. In recent studies, most cattle exposed to ovine herpesvirus type 2 under natural conditions developed asymptomatic infections rather than overt clinical signs of MCF.

Clinical signs

Most cattle affected with MCF show a dramatic clinical picture typical of a multisystemic inflammatory disease, although a great deal of variation can occur. Fever is common in all cases and rectal temperatures can go as high as 42.2°C (108°F). Typically the fever lasts as long as the acute clinical signs last. Lymphadenopathy is also found in most cases. All other clinical signs arise from a severe vasculitis which can affect the gastrointestinal tract, the central nervous system, eyes, urinary tract, liver, skin and upper respiratory tract.