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The changing clinical manifestations and pathological processes *Histophilus somni* infections in cattle

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Histophilus somni, a small, pleomorphic, Gram-negative bacteria, causes an infection commonly referred to as “Histophilosis”, implying that the infection is systemic even though the clinical manifestation may be specific to an organ system. It was first identified in 1960 as the cause of infectious thromboembolic meningoencephalitis (ITEME) in cattle fed in confinement and this encephalitic form of the infection was recognized to be the main manifestation. More recently, this manifestation is diagnosed less commonly and infection with *H. somni* has been shown to be an important cause of sporadic “sudden death” in groups of recently weaned, confined cattle and associated with diverse pathological processes involving the heart, thoracic space and lungs. Modern microbiology has demonstrated and continues to demonstrate characteristics of the organism that contribute significantly to its virulence but may not be present in all isolates. Pathogenic and commensal strains have been shown to exist. The diagnosis of Histophilosis historically was made by isolating the pathogen microbiologically which was often difficult because of prior treatment with antimicrobials. However, confirmation currently is made using molecular techniques like immunohistochemical (IHC) staining of H&E fixed tissues or polymerase chain reaction (PCR) of fresh swabs taken from the lesions. *In vitro* examination of the organism suggests it is sensitive to most antibiotics, although the minimum inhibitory concentration (MIC) needed to prevent growth of *H. somni* has apparently increased in recent years. The various clinical and pathological manifestations will be discussed with emphasis on diagnosis and complications of clinical management.

Biography

Janzen has received his Doctor of Veterinary Medicine (DVM) in 1972 from the Western College of Veterinary Medicine, Saskatoon, Saskatchewan. He has spent three years practicing in northeastern Alberta before returning to the Western College of Veterinary Medicine on Alberta-sponsored fellowship to complete Post-graduate degree. He has received MVS degree from the University of Melbourne, Australia in 1977. In 1977, he accepted a position with the Ambulatory Clinic at the Western College of Veterinary Medicine, Saskatoon, Saskatchewan and has spent his time working with a general interest in beef cattle medicine. He became associated with Feedlot Health Management Services in 2003.

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