

CLIENT EDUCATION HANDOUT

OPTIONAL
LOGO

Customer Name, Street Address, City, State, Zip code

Phone number, Alt. phone number, Fax number, e-mail address, web site

Bovine Spongiform Encephalopathy

Overview

Bovine spongiform encephalopathy (BSE) is a progressively fatal, neurodegenerative disease of cattle and is a type of transmissible spongiform encephalopathy (TSE). BSE is an OIE-reportable disease. Since the inception of the feed ban of ruminant protein to ruminants, there have been noticeable reductions in the incidence of typical BSE diagnosis. In 2014, a total of 13 cases of BSE were reported among member countries worldwide. As of 2014, 11 countries are listed as having a “controlled BSE risk”, with a significantly larger number having a “negligible risk”. Canada is currently listed as having a controlled BSE risk, with a 2014 incidence rate of 0 cases per million cattle. The United States is listed as having negligible risk. The highest incidence rate in 2014 was 1.2 cases/million cattle, as compared to peak incidence rate of over 6000 cases/million in the UK in 1992.

Species and Animal Groups Affected

Cattle, bison. Generally, affects cattle between 3 and 6 years of age and the incubation period ranges from 2 to 12 years

Signs

Slowly progressive, degenerative neurological disease. Cattle will often be ataxic, primarily on the hind limbs with hypermetria. They will also have hyperreflexia, muscle fasciculation and tremors, fall, and have behavior changes such as nervousness and frenzy. Over time, the animal will become anorexic and lose weight and body condition; dairy animals will have decreased milk production

Causes

BSE and other TSEs are believed to be caused by a pathogenic effect on neurons of an abnormal isoform of a host-encoded glycoprotein, the prion protein. The pathogenic form of this protein appears to be devoid of nucleic acids and supports its own amplification in the host through conversion of the secondary structure of host prion protein to the pathogenic protein structure. TSEs in animals primarily occur by transmitting the etiologic agent within a species, either naturally or through domestic husbandry practices.

Risk Factors

Cattle consuming prion-infected meat and bone meal or other ruminant by-products that may be contaminated with the BSE agent. No horizontal transmission has been reported.

Treatment

There is no treatment for this disease.

Management Considerations

Do not feed ruminant products to ruminants. Restrictions have been put in place in many countries that preclude the feeding of ruminant products back to ruminants, but clients should be made aware of this as a risk factor and prevent contamination of any cattle feed on their farms.

Expected Course and Prognosis

This is a progressively fatal neurodegenerative disease and 100% of the cases will die

Client Education Handout

Blackwell's 5-Minute Veterinary Consult: Ruminant 2nd Ed.

Notes

Enter notes here



Blackwell's Five-Minute Veterinary Consult: Ruminants, Second Edition, Christopher C.L. Chase, Kaitlyn A. Lutz, Erica C. McKenzie and Ahmed Tibary © 2017 John Wiley & Sons, Inc.