



Inclusion Body Disease and Divergent Arenavirus

Inclusion body disease (IBD) is a widespread infectious disease. There are no treatments or vaccines available and to date definitive diagnosis relies on histopathological evidence of inclusion bodies in post mortem tissues or biopsies.

Recent research has demonstrated the discovery of possible arenavirus like genomes isolated only from snakes that were IBD confirmed histopathologically. The three arenaviruses isolated were 'California Academy of Sciences virus', 'Golden Gate virus' and 'Collierville virus'.

Arena viruses are enveloped RNA viruses which have high genetic divergence. Therefore, a negative result does not rule out IBD with certainty as possibly there may be other, not previously described virus variants to this disease.

IBD occurs mainly in boas and pythons. Common clinical symptoms are regurgitation (especially in Boas), neurological signs including star gazing, head tilt, tremors and paralysis, loss of condition and sudden death. In young animals, the infection is often acute, usually with high mortality. In clinically symptomatic adult animals, the virus is usually chronic. A viral infection is not always associated with the development of clinical symptoms. Asymptomatic virus carriers can infect other animals. This is a common problem especially in the acquisition of animals that are to be established in a collection.

Pythons often show a more rapid progression of the disease than Boas. In recent years, IBD has rapidly increased in Boas, where regurgitation is often noted as the first symptom.

Regarding transmission, so far little is known, it can be carried via contaminated aerosols, excrement, maternal transmission and also via snake mites.

A PCR test is available to test for these Arena viruses, samples required are either EDTA/Heparin and an Oesophageal plain swab or on post mortem Brain, Pancreas, Liver and Kidney.