Subjective assessment of spinal ataxia

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Horses with severe spinal ataxia are readily recognised by varying degrees of erratic (abducted and adducted) foot placement, truncal sway, hypermetria, hypometria and dysmetria. Commonly, signs are combined, (and confused) with accompanying upper motor neuron paresis. Ataxia is generally scored (0-5) based on severity, based on work by Mayhew, and it is often helpful to evaluate each limb in turn.

Subjective scoring of ataxia is however subject to inter- and intra-observer variability and observer bias, similar to that reported for equine lameness (Keegan et al 1998, Ark et al. 2006, Olsen et al. 2014). In mild cervical compressive disease, the abnormalities may only be evident within the pelvic limbs; and these cases can be confused for pelvic limb lameness cases, especially when signs are asymmetric. In spite of this, gait abnormalities that are associated with ataxia, are usually variable and do not respond to analgesics. Because of uncertainty though, often these horses require dual assessment for musculoskeletal and neurological disease.

The subjectivity of the neurological assessment of horses creates particular problems when horses have mild ataxia, or unusual, but normal gaits. These problems are confounded in young animals that might have joint laxity and paresis that can be confused for ataxia. Unfortunately, these are the cases that often require accurate diagnosis and prognosis – in particular, decisions regarding training, purchase, insurance, safety and value all rely on an accurate diagnosis, which can be extremely difficult to provide, given the lack of ancillary diagnostic techniques with high sensitivities and specificities. The inherent problems encountered with these sorts of cases will be discussed. Further, the bias and subjectivity that is present during conventional evaluation of ataxia in horses, means that robust treatment trials (for example for surgical intervention) have yet to be reported; blinding (to treatment) the assessor in order to determine outcome offers one option when evaluating horses subjectively for improvement, but such trials are lacking in equine neurology.

References

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