Moresho than for many other syndromes, determination of a reasonable clinical diagnosis or differential diagnosis for the cause of ataxia in an individual or group is the most important aspect of medical management. This requires a thorough analysis of the signalment and history coupled with a detailed and often repeated neurological examination followed up by appropriate diagnostic testing: haematology and clinical chemistry, serology, viral isolation from blood or nasal swabs, cerebrospinal fluid collection and analysis and plain and possibly contrast (myelogram) radiographs.

Sections below will cover general management of an ataxic animal and both supportive and specific medical management and therapy.

Generally ataxia is divided into 3 syndromes of general proprioceptive ataxia, cerebellar ataxia and vestibular ataxia. The latter 2 syndromes often have other neurological abnormalities that support such a diagnosis, not least the exacerbation of ataxia and often dramatic loss of balance in response to blindfolding of cases with vestibular disease. This presentation will focus on management of the differential diagnoses of general proprioceptive, most commonly, spinal ataxia in adults.

Protection from physical trauma and prognosis

Animals with moderate to severe ataxia run a significant risk of self trauma associated with falling or colliding with stationary objects. In acute onset severely affected cases, use of protective headgear and confinement to a padded stable or post anaesthetic recovery box whilst examination, diagnostic investigation and initial management are ongoing may be required. Rarely would this be available in the field so selection of a shavings bedded stable with rubber matting is best. Alternatively confinement to a small grass paddock or a small covered arena provides the best footing to minimise the risk of falling. If animals become recumbent often their prognosis is poor and if a tentative diagnosis supports this (e.g. Equine herpes myeloencephalopathy cases that have been recumbent for >24 h) euthanasia should be considered on welfare grounds having counselled owners appropriately. Some acute onset cases of cervical vertebral stenotic myelopathy (CVSM) may become quite distressed and the anxiolytic effects of acepromazine can be useful.

Managing severely ataxic and potentially recumbent animals can be very challenging. Staff safety must be paramount. If hospitalisation is appropriate then sedation or general anaesthesia will be required. Rarely would this be available in the field so selection of a shavings bedded stable with rubber matting is best. Alternatively confinement to a small grass paddock or a small covered arena provides the best footing to minimise the risk of falling. If animals become recumbent often their prognosis is poor and if a tentative diagnosis supports this (e.g. Equine herpes myeloencephalopathy cases that have been recumbent for >24 h) euthanasia should be considered on welfare grounds having counselled owners appropriately. Some acute onset cases of cervical vertebral stenotic myelopathy (CVSM) may become quite distressed and the anxiolytic effects of acepromazine can be useful.

Cervical vertebral stenotic myelopathy (CVSM)
Stable confinement combined with NSAIDs, judicious corticosteroid use and possibly DMSO may help relieve inflammation in acute onset or acute exacerbation cases. Treatment will not effect a cure but may stabilise such animals while other diagnostics are continuing. In older animals with mild ataxia associated with static CVSM secondary to cervical vertebral facet osteoarthritis with moderate to severe radiographic changes, ultrasound-guided injection with triamcinolone acetonide (8 mg/jt, total 16 mg) or methylprednisolone acetate (40 mg/jt, total 200 mg) may be beneficial.

Equine herpes myeloencephalopathy (EHM)
A range of clinical signs spanning subclinical infection to severe ataxia and recumbency may be seen with both the single nucleotide polymorphism neurotropic and non-neurotropic strains.

The neurological presentation may include a cauda equine syndrome (with faecal and urinary retention) either alone or in combination with ataxia. Those with urinary and faecal retention will require bladder catheterisation and backraking of the rectum respectively. Appropriate antibiotic cover (potentiated sulphonamides) is required along with careful nursing to minimise urine scalding and colic. The neural injury is due to vasculitis, microthrombosis and mononuclear perivascular cuffing leading to varying degrees of spinal cord ischaemic necrosis. Although there is a small risk of a compromised immune response to EHV-1, corticosteroids may help to reduce this inflammatory response (Pusterla et al. 2009; Lunn et al. 2009); the author has used corticosteroids routinely in moderate to severe cases with no apparent ill effects.

The viraemia required for EHM has made antiviral therapy highly attractive in the prodromal phase of disease. Acyclovir has very poor bioavailability although there is some clinical evidence of efficacy. Valacyclovir and ganciclovir have a better pharmacokinetic profile, the former being suggested for in-contact or viraemic animals whilst ganciclovir is reported to have a better effect after neurological signs have developed. This can be expensive and is currently lacking a good evidence base. Supportive therapy with aspirin, lysine and Vitamin E has also been suggested.

Brain and cervical cord trauma

A traumatic event may have been seen (falling over backwards onto poll or in a race) and other neurological signs will be apparent with head trauma. Cervical fractures in animals that are apparent ill effects.

Equine protozoal myeloencephalitis (EPM)
A rare disease in the UK restricted to imported animals. In the UK situation EPM can easily be ruled out by negative serology. If positive then a CSF sample is required for Western Blot analysis to confirm a suspected clinical neuroanatomical differential diagnosis. Treatment is aimed at killing the causative protozoan Sarcocystis neurona. Published results would suggest that about 60% of cases will improve significantly and up to 20% of cases will recover following appropriate treatment with any of the US FDA approved medications: sulphadiazine/pyrimethamine, nitazoxanide or ponazuril.
References and further reading


