FOX VALLEY EQUINE PRACTICE

1N303 LaFox Rd, La Fox, IL 60147
FVEP@foxvalleyequine.com
(630) 365-5600

Shivers

Definition

Shivers is a gradually progressive, chronic neuromuscular syndrome in horses resulting in involuntary muscular spasms typically involving the hind limbs. These muscle spasms occur most commonly when the horse is asked to back up. These episodes may be frequent in some horses to infrequent in others. Any age, breed, or sex of horse may be affected however signs most commonly present in horses less than ten years old. There is a higher incidence in draft breeds and Warmbloods. Ponies are rarely affected.

Pathophysiology

The exact pathogenesis of shivers is not fully understood. Studies have proposed shivers having a link with cerebellar damage, an area of the brain that highly controls muscular activity. There may also be a correlation between shivers and polysaccharide storage myopathy (PSSM) although this is controversial and a cerebellar etiology is more in favor at this time. There appears to be a heritable component to shivers and thus, affected horses should not be bred. There is no genetic test for shivers.

Clinical Signs

The classic clinical sign of shivers is involuntary spastic contractions of the muscles of the hind limbs and tail when the horse is asked to back up. This is also commonly seen when asking the horse to pick up its foot such as when picking the hooves or shoeing. The spastic contractions can be quite severe in some cases making it difficult to shoe the horse. The spastic contraction is generally one of hyper-flexion where the hindlimb is involuntarily raised up and away from the body while simultaneously trembling. Another manifestation of shivers is one of hyper-extension where the hind limbs are placed further back than normal due to an involuntary rigid extension of the limbs. Most horses are still able to trot and canter normally. A horse may also exhibit slowly progressive muscle atrophy and weakness of the hind-end muscles. Shivers can also affect muscles of the forelimbs, head, neck, and trunk although overt clinical signs of this are much less common than that of the hind limbs.

Diagnosis

Diagnosis is made based upon history, clinical signs, and ruling out other potential neuromuscular conditions that could explain the clinical signs. Neurologic and lameness exams are performed to help in this. Bloodwork including muscle enzymes are typically normal. Shivers can be quite difficult to diagnose in early stages but is relatively more straightforward to diagnose in more advanced cases.

Treatment

There is no cure for shivers, however there are measures that can be taken to help manage this disease process. A high fat, high protein, low carbohydrate diet has been proposed to help decrease the frequency of muscle spasms. Vitamin E and magnesium supplementation can be provided to support neuromuscular health. Chiropractic and acupuncture has also been used with positive results. Keeping horses in a regular working program along with ample turnout is highly recommended to help slow progression.

Prognosis

Shivers is considered a progressive disease, however the progression of disease can be quite variable. Because most horses are not affected at gates faster than the walk, many horses go on to have very successful long term riding careers. In more advanced cases, clinical signs may worsen enough to make it difficult for the horse to have a good quality of life. If the previously mentioned measures of diet management and exercise are instituted, most horses are slow to progress or even improve in their clinical signs.