

Poor Performance In Barrel Racing Horses – Spine

With hindlimb lameness of any degree, compensatory soreness is frequently encountered in a single location or in multiple sites. Common sites of compensatory soreness secondary to hindlimb lameness are the sacroiliac/middle gluteal muscle region, trochanteric bursa, and thoracolumbar region. Soreness originating from these regions can be readily detected with digital palpation/pressure. Without alleviating the primary lameness source, a compensatory soreness will not resolve. Often, these areas of compensatory soreness are treated with some combination of local injection therapies, systemic anti-inflammatories, and/or muscle relaxants.

Cervical vertebral articular facet osteoarthritis is common in horses, even without clinical signs. Initially, symptoms of cervical vertebral facet osteoarthritis are diverse and may only be appreciated while working. The horse may appear stiff, the neck may not move up and down as much as usual at the walk, and when worked on circles the head is out with no flexion of the neck depending on the circle diameter. It is not uncommon for the horse to have an altered hindlimb gait characteristic that can be confusing with a hindlimb lameness. This altered hindlimb gait characteristic can sometimes be exaggerated by elevating the horse's head while walking. When bone proliferation is present at or around the facet joints, neck flexibility can be limited yielding reduced athletic performance and may result in gait asymmetry; consequently, barrel racing horses may have difficulty making sharp

turns. Clinically, cervical vertebral osteoarthritis is suspected based on the above histories, when an asymmetric range of motion is present, a painful response is elicited with firm hand pressure, or asymmetrical size or shape of the articular facets palpated. Neck radiographs may reveal mis-shaped or enlarged articular facets, irregular articular facet borders, bone proliferation of the articular facets, or bone spur formation within the spinal canal. Ultrasonography is used to image the articular facet joint space and size, as well as document bone proliferation along the edges of the articular facet joint. Bone scans can be used to identify facet joints with evidence of active inflammation. Treatment of cervical vertebral osteoarthritis initially includes the use of non-steroidal anti-inflammatories, but usually progresses to the point of requiring intra-articular anti-inflammatory injections using ultrasound guidance. Once the horse becomes non-responsive to intra-articular anti-inflammatory injections or if there is any indication of spinal cord compression, surgical fusion of the affected articulation should be performed.

Primary thoracolumbar soreness is commonly recognized. Horses with primary thoracolumbar soreness have troubles bending and hollowing out; bucking is a common complaint. Dorsal spinous impingement (aka “kissing spine disease”) can be a solitary site or involve multiple locations with varying degrees of impingement. Clinically, primary thoracolumbar soreness is suspected based on the above histories and when a painful response is elicited with firm hand



pressure and confirmed with radiographs. Radiographic signs of dorsal spinous impingement include narrowing of the interspinous space, over-riding dorsal spinous processes, dorsal spinous process sclerosis, mis-shaped dorsal spinous process, and osteolysis. Ultrasonography of thoracolumbar spine affected with dorsal spinous impingement often has corresponding articular facet bone spurs. Initial therapy of horses diagnosed with dorsal spinous impingement involves injection of the affected site(s) with or without ultrasonographic guidance using anti-inflammatories; response to medical therapy is variable and often needs to be repeated. Implementing back exercises that engage the core abdominal musculature and axial skeleton are beneficial long-term rehabilitation therapies. Training exercises involving a Pessoa device 2-3 times a week, working over cavalettes, and long-trotting help engage the abdominal core musculature. Aqua-tred therapy can help build back and supporting abdominal musculature. Surgery can be and is performed in these cases with a good return to racing. Proper saddle fit is also very important in horses with primary thoracolumbar soreness.

For questions regarding poor performance in barrel racing horses, please feel free to call one of Brazos Valley Equine Hospitals locations or visit bveh.com.