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Articular facet disease in the neck of the horse: An increasingly recognised problem?

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Articular process joint (APJ) disease has 3 potential aetiologies: developmental, degenerate and traumatic. The result is either primary joint pain, or extra spinal cord compression (cervical vertebral compressive myelopathy) or both. Both conditions are incompletely reported in the horse but have been recognised by specialist clinicians for a long time. Recently appreciation by general practitioners and lay people has increased.

Cervical vertebral compressive myelopathy

Aetiology
Extra-dural spinal cord compression associated with pathological changes: articular process joint osteophyisis, interarcuate ligament hypertrophy, thickening of the dorsal lamina, ligamentum flavum stretching, chronic cartilage microtrauma, sub-chondral cysts, vertebral subluxation, endplate flaring and articular process synovial cysts. Occurs C2–3 to C7–T1 and is distinct from occipitoatlantoaxial malformation. Compression produces lesions of the peripheral white matter, spreading deeper to progressively interrupt afferent sensory proprioceptive and descending upper motor neuron pathways. Two age groups affected: younger animals (<4-y-o), older animals (>B-y-o).

Horses <4-y-o
Otherwise known as ‘Wobbler’ syndrome, cervical stenotic myelopathy. Most common in young Thoroughbred and Warmblood and in geldings. Usually acute onset progressive ataxia, paressis and dysmetria, recent trauma precede onset. Diagnosis is controversial, this author recommends a combination of laterolateral and oblique plain radiographs (graded as per Down and Henson 2009), complete with intra- and intervertebral mean sagittal ratios; and cervical myelography. Cerebrospinal fluid analysis is of little value in the UK unless infectious disease is a differential. Management in young horses has 2 stages. The immediate aim is to reduce neuronal cell swelling using intravenous corticosteroids, DMSO, vitamin E and strict box rest. In cases of dynamic compression up to C4–5, the use of a neck brace is possible. The next stage is reducing repetitive trauma of the spinal cord, which can be achieved medically or surgically. In cases <1-y-o with acute dynamic compression, a ‘paced diet’ programme can be followed. Total daily dietary intake is 75% of 2% of bodyweight, and should be adjusted monthly. Low nonstructural carbohydrate diets are best (this author uses Spillers 2% of bodyweight, and should be adjusted monthly. Low energy diet and confinement in young horses with wobbles. Equine Vet. J. 41, 518-524.

Older horses
Cases have a history of poor performance (unbalanced, refusing to jump, weak behind), can be reported to stumble and trip, particularly downhill. Multilimb ataxia, paressis and dysmetria (h/l>f/l) are found neurologically. Plain laterolateral radiographs show articular facet osteophytosis, reduced articular process clearance over the intervertebral foramen and vertebral column subluxation. C5–6 and C6–7 are most commonly affected, due to the relatively higher degree of caudal cervical vertebral column mobility, and increased biomechanical forces in this area. This results in chronic APJ cartilage and ligamentum flavum microtrauma, generating vertebral column instability, fibrocartilagenous proliferation, osteosclerosis of the dorsal lamina and compressive myelopathy. This author recommends APJ corticosteroid therapy, suitable cases are those with grade 2–3 neurological dysfunction and moderate, but obvious radiographic changes (grade 2b–3d) and normal mean sagittal ratios. Approximately 80% cases improve 2 neurological grades. Signs typically recur after 2–4 years, repeat therapy is typically equally effective provided radiographic progression has not occurred.

Neck pain
Neck pain in horses is poorly understood. Clinical signs are often subtle and varied, and may only occur in specific neck positions. There are no definitive diagnostic tests, APJ local anaesthesia is possible but may cause ataxia. More severe cases can present with ‘locking’ signs. Radiography is diagnostic in cases of discopondylitis, APJ changes are harder to interpret and may warrant diagnostic medication. Neck pain only occurs in <10% cases with neurological dysfunction.

References and further reading
Hall 5 — Thursday 13th September


