

EquineReview

Introduction: This edition of the Equine Review looks at recent papers on osteochondral fragmentation and surgical removal of intra-articular bodies from the cervical articular process joints, and the effect of bit chewing on gastrointestinal transit time in clinically normal horses.

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Osteochondral fragmentation of the cervical articular process joints

Recent advances in technology now allow computed tomography (CT) imaging of the entire equine cervical region, which has significantly advanced the investigation of cervical dysfunction. Osteochondral fragmentation of the cervical articular process joints (CAPJ) has been described in isolated case reports but is increasingly recognised in horses undergoing CT examination of the neck.

In a recent retrospective case series, Tucker et al (2022a) described the prevalence and clinical features of osteochondral fragmentation within the CAPJ in 55 horses undergoing CT of the neck.

Fragmentation was present in 13/55 (24%) of cases, in a range of breeds, ages and disciplines. Within the fragment group, a total of 22 fragments were identified in 15 CAPJs distributed throughout the cervical region, including the C7/T1 APJ. In 6/13 horses, the osteochondral fragmentation was considered the primary cause of the cervical dysfunction, and 11/13 horses had additional CT abnormalities. Cervical radiographs were available for 10/13 horses; mineral attenuating fragments were identified in only four cases (40%).

Surgical removal of intra-articular loose bodies from the cervical articular process joints

Where fragmentation of the CAPJ was considered clinically significant, surgical removal of the fragments is a logical treatment option, but is also infrequently described in the literature.

In a separate study, Tucker et al (2022b) de-

scribed the removal of a total of 13 fragments from six CAPJs in five horses. Fragments were all located in the caudal cervical region from C4/5 to C6/7. All horses presented with cervical pain rather than ataxia as the primary complaint. No significant complications were encountered and at long-term follow up, 4/5 horses had shown complete resolution of clinical signs, with one horse showing a partial improvement.

Histology revealed layers of cartilage surrounding a central area of degenerate cartilage or bone, suggestive of synovial (osteo) chondromatosis whereby a nidus of tissue progressively enlarges within the synovial space. The authors concluded that osteochondral fragmentation within the CAPJ was an under-reported and potentially significant cause of cervical dysfunction. In horses where the fragments were considered the primary lesion, arthroscopic removal is a potential treatment option which warrants further investigation.

The effect of bit chewing on gastrointestinal transit time in clinically normal horses

Ileus is a frequent and potentially devastating complication following gastrointestinal surgery in horses and currently no single therapeutic option is considered completely effective.

In human patients, several non-pharmacological interventions are used for the management of ileus including early feeding and gum chewing. Such interventions warrant investigation in horses and in a recent prospective crossover study, Patton et al (2022) evaluated the effect of bit chewing on gastrointestinal

transit time, duodenal motility and borborygmi in clinically normal horses.

A bit was placed in the mouth of the treatment group for 20 minutes every 6 hours over the 7-day study period, following the administration of coloured beads, which were collected from the faeces to measure transit time. Borborygmi were assessed using auscultation and duodenal contractility was assessed using ultrasonography.

Horses in the bit wearing group had significantly ($P=0.0156$) decreased transit time (median 106 hours, range 70–133 hours for 80% bead clearance) compared with the control group (median 170 hours, range 149–186). Duodenal contractility and borborygmi were not significantly different between groups. The authors concluded that despite the limitations of the small sample size in clinically normal horses, the use of bit chewing warrants further investigation for the treatment of postoperative ileus. **EQ**

References

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