Highlights of recent clinically relevant papers

Digital neurectomy in horses with foot pain
S.D. Gutierrez-Nibeyro and colleagues in the USA have recently published their retrospective study evaluating the short- and long-term outcomes of 50 horses that underwent palmar or plantar digital neurectomy due to chronic foot pain, and related this outcome to preoperative factors including magnetic resonance imaging (MRI) findings.

Magnetic resonance imaging and radiographic analyses were conducted retrospectively by a single operator for each imaging modality. Variables such as age, breed, sex, athletic activity, lameness duration and response to local anaesthesia were analysed to assess if they were associated with likelihood of post operative lameness; logistic regression was then performed to assess the relationship between the variables, long-term survival was also assessed. The included horses competed at a low-level in a range of disciplines. Those horses that had persistent lameness following local anaesthesia were found to have an increased likelihood of post operative lameness compared to those whose lameness completely resolved following this diagnostic procedure. Time to follow-up varied but overall 92% of horses became sound following surgery, with 80% and 70% remaining sound at 15 months and 30 months, respectively. Neuroma formation was a complication in 2 cases. The median time to reoccurrence of lameness was 20 months. Those horses that were found to have a core or linear lesion of the deep digital flexor tendon (DDFT) on MRI were significantly more likely to have lameness recurrence following surgery.

This study provides useful data to inform clients of the potential long-term outcome of a palmar or plantar digital neurectomy, when MRI findings are available. Horses with a core or linear DDFT lesion are less likely to respond to this surgical procedure than those without.

Racehorse injuries after corticosteroid injection
In this retrospective cohort study, R. Whitton and colleagues in Australia and the UK compared the rates of musculoskeletal injury (MSI) in horses receiving local corticosteroid injection (LCI) with those that were untreated and those prior to treatment.

Of the 1911 horses in this study, 392 were treated with an injection of corticosteroid into or adjacent to a synovial structure, muscle or tendon/ligament. Limb injuries following which the horse did not race for at least 6 months, or was retired were classified as MSIs. Hazard of injury following injection was compared to that in untreated horses and those prior to treatment to calculate the hazard ratio (HR). All 392 horses were administered at least one LCI, with most LCIs performed bilaterally and intra-articularity into the carpal or fore fetlock joints. Carpal injuries, fore fetlock and forelimb tendon injuries were the most common of the 219 MSIs that occurred. Following LCI the hazard of MSI was greater (HR 4.83) than the incidence rate of MSI in untreated horses and those prior to injection (1.22 injuries/100 horse-months). The hazard ratio returned to pretreatment levels after 49 days. The hazard for MSI in horses following second and subsequent LCIs was greater than in horses following their first LCI.

The authors concluded that there was a positive association between LCI and subsequent MSI rates which was most likely due to progression of the musculoskeletal condition which prompted treatment. Assuming horses that received LCI were at increased risk of MSI subsequently, any beneficial effects of the LCI were insufficient to counter this increased risk for at least 49 days after the injection.

Monitoring equine visceral pain
In this study, Johannes van Loon and colleagues in The Netherlands and Belgium have assessed the validity and clinical application of the composite pain scale (CPS) in horses after emergency gastrointestinal surgery.

Forty-eight horses which had undergone emergency gastrointestinal surgery had composite pain scores determined every 4 h for 3 days. Interobserver reliability was recorded and a further composite visceral pain score (numerical rating scale, NRS) was determined alongside the CPS scores. Composite pain scores had higher interobserver reliability compared to NRS scores. Scores on both CPS and NRS were lower for horses that survived without complications than horses that were subjected to euthanasia or had to undergo further surgery.

The authors concluded that the use of the CPS improved objectivity of pain scoring in horses following emergency gastrointestinal surgery. High interobserver reliability allows for comparisons between different observers, which can be of great benefit in larger veterinary hospitals where each horse is often cared for by several clinicians.

Comparison of anastomosis techniques
In this retrospective study, Kristyn Close and colleagues in the USA and UK have compared post operative complications and survival in horses following small intestinal resection and anastomosis using 2 anastomosis techniques (single layer Lembert; double layer simple continuous) with jejunoileostomy.

Comparison of anastomosis techniques
Methods of 53 horses that had small intestinal resection and anastomosis were reviewed and horses were divided into groups based on technique and type of anastomosis. Pre- and intraoperative findings (disease severity), post operative complications, and survival rates were compared between groups.

The authors found no differences in disease severity, post operative complications, or survival between single layer or double layer anastomoses. There were no differences in disease severity or survival between jejunoileostomy or jejunojejunostomy. There was a higher incidence of post operative colic in hospital after jejunoileostomy compared with jejunojejunostomy.

Effect of limb positioning on radiographs
In this study, Erin Contino and colleagues in the USA investigated the effect of limb positioning on the radiographic appearance of the distal and proximal interphalangeal joint spaces of the forelimbs of horses during evaluation of dorsopalmar radiographs.

Dorsopalmar radiographs of each foot were obtained with the horse standing with its forelimbs positioned on blocks in 3
positions: squarely positioned (abducted 0°) and abducted 5° and 10°. The spaces at the medial and lateral aspects of the distal and proximal interphalangeal joints were measured. The difference between the widths of the lateral and medial joint spaces were used to calculate the mediolateral joint balance, and these measurements were compared among all 3 positions.

The medial aspect of the proximal and distal interphalangeal joints became narrower when the extent of limb abduction increased, compared with the corresponding lateral aspect of those joints. For both the distal and proximal interphalangeal joints, the mediolateral joint balance differed significantly among all limb positions. Therefore, the authors consider it crucial that the forelimbs of horses be squarely positioned when dorsopalmar radiographs are obtained for accurate evaluation of interphalangeal joint space and balance.

Racing following desmotomy for SDFT

In this study, Alaine Hu and Larry Bramlage from the USA assessed the post operative likelihood of racing, career longevity and convalescent time in Thoroughbred racehorses with superficial digital flexor tendinitis (SDFT) in the forelimbs treated by desmotomy of the accessory ligament of the superficial digital flexor tendon (i.e. superior check ligament desmotomy [SCLD]).

Medical and racing records of 332 Thoroughbred racehorses with moderate to severe SDFT treated by SCLD were reviewed to assess return to racing, number of races completed, time to first race, and lifetime performance. Following injury and treatment 69% returned to racing, with 66% of horses that had not raced prior to injury and 70% of horses that had raced prior to injury racing after treatment. Of the horses that returned to racing, 70% raced ≥5 times after surgery. Median time to first race after surgery was 302 days, with a median of 8 starts/horse. Sex and treated limb did not have a significant effect on return to racing. However, horses ≥5 years old were found to be significantly less likely to return to racing than younger horses.

In this study convalescent times were shorter, compared with previous recommendations, and treated horses had a longer racing career after surgery than has been described for other treatment modalities. The results of this study suggest that SCLD should be considered as part of a treatment plan for SDFT in Thoroughbred racehorses.

Risk factors for recurrent colic in the UK

Claire Scantlebury and colleagues in the UK have recently published their study examining the management and horse-level risk factors for recurrent colic in the UK general equine practice population. It is well acknowledged that following one episode of colic, a horse is at risk of further episodes in the time period following the initial episode. This study looked at a population of horses (59 colic cases and 177 controls) and over time in order to identify risk factors for recurrent colic. Of the horses with recurrent colic, the median time to the first recurrence was 101 days, with between 2 and 5 recurrences occurring over the study period. An increasing time spent at pasture was found to have a protective effect on the risk of recurrence, with almost linear relationship between increased time at pasture and decreased risk of colic recurrence. There was an increased risk in horses who displayed stereotypical behaviours such as weaving and windsucking. In this group, feeding fruit and vegetables had a protective effect, although it is not known if this is due to differing management approaches rather than the specific feeding practice. Unlike previous studies, the temporal effect of risk factors was examined here by the use of a nested case-control design, which allowed exposure to the various risk factors to be recorded prior to the colic episode.

The authors concluded that horses which display stereotypical behaviours (crib-biting, windsucking or weaving) or who have minimal access to grazing are at increased risk of recurrent colic.

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References


