Equine*Review*

Introduction: This edition's Equine *Review* presents papers on the outcomes of exploratory laparotomy in donkeys, complications following sacroiliac joint injection in horses, and the predictors of laminitis development in ponies.

https://doi.org/10.12968/ukve.2023.7.2.74

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Outcomes following emergency exploratory laparotomy in UK donkeys

In comparison to horses, exploratory laparotomy is infrequently performed in the UK for the treatment of colic in donkeys and there is little published data in the literature regarding survival and complication rates.

In a recent multicentre retrospective study, Merridale-Punter et al (2023) reported findings and outcomes in 33 UK donkeys undergoing emergency exploratory laparotomy. Despite having a surgical lesion, only 53% of donkeys presented with colic signs, with the remaining 47% showing non-specific signs such as inappetence or lethargy. Furthermore, only 25% were referred within 12 hours of the onset of clinical signs, with 30% referred after >72 hours duration.

A broad range of lesions were described, with primary small intestine (43%) and primary large intestine (39%) lesions being the most common. Impactions or intraluminal obstructions were common, accounting for 25% of the lesions found. Five (15%) donkeys were euthanised in theatre and a further 10 (30%) died or were euthanised after surgery, resulting in a 55% survival rate to discharge. Of the analysed variables, only increasing age was associated with an increased likelihood of death (1.18, P=0.02). Postoperative complications occurred in 82% of donkeys and included hyperlipaemia, incisional complications, intravenous catheter complications, ileus and colic. Of the 28 donkeys that recovered from the initial surgery, six underwent a second exploratory laparotomy, of which four survived. Limitations of the study included the small sample size and retrospective nature, but the authors concluded that donkeys undergoing emergency exploratory laparotomy have a lower rate of survival to discharge than horses. They were also likely to show a wide range of presenting clinical signs, which may result in delayed referrals for surgery.

Complications following sacroiliac joint injection in horses

Injection of the equine sacroiliac region is commonly performed, but there are limited data on the incidence and type of complications that may be experienced as a result. Local anaesthetic may be used for the purposes of diagnostic analgesia, or a therapeutic agent injected; some clinicians choose to 'block and medicate' at the same time with a combined medication.

In a recent cross-sectional survey, Nagy and Dyson (2023) described the complications experienced following diagnostic, therapeutic or combined medication. More clinicians (48%) experienced complications after diagnostic injection than either medication (18%) or combined injections (12%) (P<0.01). Hind limb ataxia and weakness were the most common complication for all injections, followed by recumbency.

Death or euthanasia as a result of complications following injection was reported by 2.7% (5/187) of clinicians following therapeutic injection, and 0.9% (1/110) following diagnostic injection. Clinician age, experience and injection technique were not associated with an increased likelihood of experiencing complications. The authors concluded that more complications occurred following diagnostic injection, compared with therapeutic and combined medication, but stressed that complications rates were low for sacroiliac injection in general and further studies are required to evaluate specific risk factors.

Predictors of laminitis development in non-laminitic ponies

Laminitis is a significant cause of morbidity and mortality in equids and may be endocrinopathic, mechanical or inflammatory in origin. Ponies are more prone to endocrinopathic laminitis than horses, and there are various risk factors.

In a recent prospective cohort study, Knowles et al (2023) studied 374 initially non-laminitic ponies over 891 pony years to identify specific management, metabolic and physical examination factors related to laminitis development.

Every 6 months the ponies underwent physical examination, and blood sampling for basal insulin (T0), adrenocorticotropic hormone, glucose, triglycerides and adiponectin was performed. Insulin was also analysed at 30 minutes (T30) and 60 minutes (T60) post-administration of corn syrup (Karo-Lite test). The incidence of laminitis was 4.8 cases/100 pony years over the course of the study.

Multivariate analysis retained basal insulin (T0), insulin (T60), divergent hoof growth and adiponectin as significant factors for the development of laminitis. Adrenocorticotropic hormone was not independently associated with laminitis development. The authors cautioned that these results may not be generalisable to different breeds, geographical locations or management types, but concluded that basal insulin and insulin 60 minutes post Karo-Lite administration were best able to quantify the risk of laminitis development in non-laminitic ponies. EQ

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