PEROPERATIVE MESH OBLITERATION OF EPILOIC FORAMEN TO PREVENT RECURRENT ENTRAPMENT

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Background: Entrapment of small intestine into the epiploic foramen (EEF) represents an important cause of strangulating small intestinal obstruction (SSI). Both the short and long-term prognosis seem to be less favourable than for other types of SSI.

Objectives: The aim of the study is to report a technique of mesh closure of the epiploic foramen (EF) during emergency coeliotomy and to report short- and long-term outcome of horses operated for EEF with mesh closure.

Methods: A polypropylene net was rolled and fixed by one stitch to obtain a cone coated with a piece of resected omentum and inserted into the EF from the medial to lateral side at the end of the laparotomy.

Results: 12 horses with a mean age of 10 years suffering from EEF (one horse 3rd time within 6 months) underwent surgery for correction of entrapment and mesh closure. Post-operative complications (mainly paralytic ileus) occurred in 5 of the 12 horses. One horse was euthanized due to recurrence of severe colic (volvulus). Necropsy confirmed the mesh remaining in the EF. Long-term follow-up was available in 9 horses and the outcome was favourable in 9 horses. One horse had an exploratory coelioscopy 5 months after surgery (other cause of recurrent colic) and fibrous closure of the EF was confirmed. One horse was euthanized 3.5 years after mesh placement due to unrelated reasons and the fibrous integration of the mesh in the EF was shown at necropsy.

Conclusion: Mesh closure of EF during emergency coeliotomy avoids additional surgery and prevents recurrence of EEF in horses.

Ethical animal research: Informed client consent was obtained. Source of funding: None. Competing interests: None.

TECHNIQUE ASSOCIATED OUTCOMES IN HORSES FOLLOWING COLECTOMY

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Background: Large colon related diseases are commonly associated with colic in horses. Colectomy is performed in some cases to prevent colic recurrence or for salvage in cases with severe disease and intestinal necrosis.

Objective: To compare survival and complications in horses undergoing large colon resection with either sutured end-to-end or stapled functional end-to-end anastomoses.

Methods: Retrospective data were retrieved from the medical records of 26 horses undergoing colectomy, including 14 horses with sutured end-to-end and 12 horses with stapled functional end-to-end anastomoses between 2003 and 2016. Records were evaluated for signalment, medical and surgical treatments, and survival to hospital discharge. Long-term follow-up was obtained through owner contact. Continuous variables were compared with Mann-Whitney tests. Fishers exact testing was used to compare survival to hospital discharge. Survival time was compared by constructing survival curves and performing log-rank curve comparison testing.

Results: Median age of horses undergoing colectomy was 12 years. Reason for colectomy was prophylactic (12) or salvage (14). Median surgical time was 3 hours in both groups. Median hospitalization time was 8 days, which did not differ with anastomosis type (P = 0.72). Nine of 12 horses undergoing stapled functional end-to-end anastomosis and 12 of 14 horses undergoing sutured end-to-end anastomosis survived to hospital discharge (P = 0.63). Long-term follow-up of >6 months after hospital discharge was available for 24 horses. Survival time did not differ with anastomosis technique (P = 0.75).

Objectives: We hypothesized that treatment of post-surgical SISO horses with either firocoxib (COX-2-selective) or flunixin (nonselective) would result in effective pain control while endotoxemia would be reduced in the firocoxib group.

Methods: Post-operative SISO patients were administered either flunixin (1.1 mg/kg IV q12 h) or firocoxib (0.3 mg/kg IV loading dose; 0.1 mg/kg IV q24 h) in a blinded randomized control trial.

Results: In 46 cases, we observed no significant difference in pain control between the two groups (P = 0.438). COX selectivity was confirmed by significant suppression of plasma prostaglandine E2 in the flunixin group (COX-1 inhibition, P = 0.012), whereas both drugs equally suppressed PGE2 production (COX-2 inhibition, P = 0.190). The flunixin group had a 2-fold relative risk of elevated plasma sCD14, a marker of endotoxemia, although this was not statistically significant (relative risk 1.94, confidence interval 0.462–7.38). However, there was no significant difference in TNFα between groups (P = 0.398).

Conclusions: In SISO patients, flunixin or firocoxib effectively controls postoperative pain, but firocoxib may be associated with a reduced risk of clinical endotoxemia. The trial is currently receiving additional cases to further assess endotoxemia.

Ethical animal research: Animal use approved by the NC State University Institutional Animal Care and Use Committee. Owner consent was obtained at recruitment. Source of funding: Grayson-Jockey Club Research Foundation. Competing interests: None.