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NEW DEVICE FOR ELECTIVE INVERSION OF THE NECROTIC ILEAL STUMP

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Background: Leaving a necrotic ileal stump has been blamed as a cause of poor prognosis in jejunocaecal anastomosis. Elective inversion of the necrotic stump has been described by means of a nasogastric tube, although this procedure can be cumbersome and has been reported to cause caecocolic orifice occlusion.

Objectives: To describe a new device and its use for elective inversion of necrotic ileal stump.

Methods: The device was constructed securing 0.5 m of hemp tape to a 0.7 m of electrical cable puller. The device is inserted in the ileum and passed into the caecum. A TA90 stapler or USP 2 PDS suture is used to occlude the ileal lumen and simultaneously secure the tape to the intestine. The ileum is then resected. A small tiphlotomy is made at the proposed site for the jejunocaecal anastomosis. The device, protected by an arthroscopy sleeve, is retrieved by an assistant. The hemp tape is cut flush to the ileal mucosa. The tiphlotomy is closed. The device was tested ex-vivo for pullout force with a digital dynamometer and used in three clinical cases.

Results: The device was easily secured to the intestine. Small enterotomies were sufficient both to insert and remove the device. Securing of the device to the intestine resulted effective both with TA stapler and sutures.

Conclusions: The device resulted effective in inverting the ileal stump in clinical cases. Leaving a short, inverted stump, this method could help improving prognosis for jejunocaecal anastomosis, possibly avoiding undesired side effects of the procedure.

Ethical animal research: No ethical approval required.

Source of funding: None.
Competing interests: None.

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VOLVULUS NODOSUS OF THE SMALL INTESTINE: DIFFERENCES IN FOALS AND ADULTS (5 CASES)

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Background: Volvulus nodosus is a strangulating lesion of the small intestine described only in foals and in just one case in older horses. Huskamp (1982) described the pathophysiology of volvulus nodosus in foals, but to date there is no description of the pathophysiology of volvulus nodosus in adults.

Objectives: To describe the different features of volvulus nodosus in adult horses and in foals

Methods: Analysis of the clinical and anatomical features of two foals and three adults presenting with volvulus nodosus.

Results: Clinical presentation between foals and adults differed mainly for the mild or absent pain showed by older horses. Clinical and ultrasonography findings were similar. At surgery or necropsy we found anatomical differences between adults and foals. In adults, the volvulus didn't involve the mesentery that instead forms a hernia sac in foals. Further, in adults, there wasn't involvement of the ileum but two loops of jejunum resulted one wrapped around another in all three cases. After accurate analysis of one case at necropsy, we found that in adults one loop act as a 'post' around which another loop turns around. The weight of this loop causes then the formation of a half-hitch formed by the two loops and their mesentery. This cause strangulation and necrosis of two separate tract of jejunum.

Conclusions: Volvulus nodosus may occur in adult horses with significant differences compared to foals. Knowing the presentation and pathophysiology of volvulus nodosus may help equine surgeons to resolve selected cases of small intestinal strangulation in adult horses.

Ethical animal research: Not required.

Source of funding: None.
Competing interests: None.

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WHY IS THE ILEUM INVOLVED IN THE MAJORITY OF CASES OF INTERNAL HERNIAS? A BIOMECHANICAL HYPOTHESIS

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Background: Ileum is involved in 64–81% of cases of epiploic foramen entrapment and 49–53% of inguinal hernias. To date no explanation for this occurrence has been proposed.

Objectives: To offer a possible explanation of the high rate of ileal involvement in internal hernias

Methods: Analysis of the surgical and anatomical features of 21 cases of strangulation of the small intestine in internal hernia in horses.

Results: In 6/13 cases involving the ileum, the incarcerated segment presented less severe pathological features proceeding proximal to distal. These suggest a different, progressive involvement of the distal bowel along with the duration of the pathology. We hypothesised that the relative movement between bowel and ingesta may cause this. Once a portion of intestine enters the hernial port, its luminal content cannot proceed aborally due to the external luminal