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ENTEROTOMY VS ENTERORESECTION

In this presentation decision making in intestinal surgery will be discussed from a practical point of view. The most frequent indications for surgery will be presented.

Small intestine
Surgery of the small intestine is most often indicated for obstruction caused by foreign bodies or masses.

Enterotomy
In most cases an enterotomy is sufficient for foreign body removal, but in a number of cases extensive damage to the small intestine, may be an indication for resection of a part of the small intestine.

An extra-abdominal procedure is recommended to avoid contamination of the abdominal cavity. Some parts of the small intestine have a limited mobility. Parts of the duodenum cannot be lifted out of the abdomen. The duodeno-colic ligament may be severed up to the pancreatico/duodenal vessels to increase exposure and mobility.

Closure of intestinal incisions
Monofilament absorbable suture material is recommended: size may vary from 4/0 to 3/0. Simple perforating interrupted sutures are placed approximately 1-1,5 mm apart and tissue bites are 1,5 to 2 mm. Crushing sutures are possible but not recommended. A continuous suture pattern may also be used. Mucosal prolapse should be avoided. Remaining parts of protruding mucosa can easily be removed with moist gauze sponges.

Enteric resection
Resection of a part of the small intestine is indicated when the passage of a foreign body has severely compromised the viability of the intestinal wall. Removal of a linear foreign body may also require resection of a part of the small intestine. Neoplastic disease of the intestine is a common indication for resection. In younger dogs intussusception of the small intestine into the large intestine is an indication for resection. Other less frequent indications include localized inflammatory processes, severe adhesion and necrosis due to ischaemia.
Resection requires proper ligation of the supplying vessels. Sealing devices may be used for this purpose and are especially recommended in larger and more complicated procedures such as resection of the ileo/caecal junction (as in intussusception).
Closure is basically the same as for enterotomy. Closure is started at the mesenteric- and antimesenteric borders.

Before repositioning the small intestine into the abdomen it is liberally flushed with an appropriate amount of warm saline. Intra/abdominal procedures require flushing of the abdomen with liberal amounts of warm saline. Intra/abdominal administration of antibiotics or antiseptics is obsolete.
Intraluminal administration of fluids to test for leakage is recommended by some text books and disputed by others. Enteropexy of the jejunum to prevent recurrence of intussusception is recommend as well as disputed.

Large intestine
Surgery of the large intestine is much less common than of the small intestine in dogs Indication include obstruction, perforation, neoplastic disease and colonic inertia (megacolon).

In cats subtotal colectomy and colopexy are the most common indications for surgery of the large intestine. In dogs colopexy may be also used as an adjunct in the treatment of severe perineal hernia.

Colotomy
Accumulation of bone or wood fragments may result in severe tenesmus and obstipation. Attempts to alleviate the obstipation by digital removal of faecal material and lavage of the colon through the anus is cumbersome, frustrating and time consuming. In severe cases surgery is recommended.
After caudal laparotomy the colon is lifted out of the abdominal cavity and placed on an impermeable drape. Spillage of faecal material into the abdomen should be prevented. The colon is incised over an appropriate length at the antimesenterial border.

Accumulated faecal material is gently massaged out of the colon. In some cases this may require considerable force. Crumbs of faeces should be rinsed of the colon.
The incision is closed in 2 layers. A simple continuous absorbable suture is used to close the mucosal layer followed by an inverting suture of the seromuscular layers (Lembert). The resulting suture line may be covered by a serosal patch. A loop of small intestine may be employed to cover the suture line. This loop is sutured over the colonic incision in a continuous fashion.

Resection of the colon
In cats surgery of the colon is more common than in dogs. Subtotal colectomy is the most common indication in the older cat while colopexy is the most frequent indication in the younger cat.

Antimicrobial prophylaxis
The use of antibiotics is mandatory in enteric surgery. Several protocols are available for intestinal procedures. Prophylaxis should be started at the time of induction of anaesthesia and continued for a maximum of 24 hours. Antimicrobial treatment after 24 hours is usually not necessary. Leakage of enteric contents after surgery will not be prevented by antimicrobials. One of the first signs of leakage: fever, will be masked by the administration of antimicrobials thus resulting in a delay in the detection of developing peritonitis.