INTESTINAL SURGERY

ENTROTOMY

Enterotomy is an intestinal operation that allows access to the lumen of the digestive tract. It involves a longitudinal incision made on the anti-mesenteric border. It is frequently performed in carnivores to extract foreign bodies causing intestinal obstruction.

Preparation

- Cattle: Operation performed standing, with right flank anesthesia (Berthelon or paravertebral).
- Carnivores: General anesthesia with mandatory tracheal intubation. Isotonic saline with procaine or lignocaine is used for peritoneal lavage. Patient is typically dehydrated due to vomiting from intestinal obstruction, requiring fluid therapy.

Surgical Steps

1. Laparotomy: Midline approach in carnivores; right flank in cattle.

2. Identification and Exteriorization: Locate the obstructed loop, dilated proximal to the obstruction and flaccid distal. Exteriorize only the affected loop, protecting it from dehydration and contamination (e.g., with a sterile plastic bag).

3. Isolation: Apply Doyen coprostasis clamps (soft-jawed) proximal and distal to the obstruction to prevent spillage.

4. Incision and Foreign Body Extraction: Make the incision on the anti-mesenteric border, in a healthy area if possible. Extract the foreign body, collect it on antiseptic gauze, and remove it. Disinfect the intestinal wound.

5. Intestinal Suture: Close the enterotomy with a simple continuous appositional suture (e.g., using a monofilament absorbable suture) on the anti-mesenteric border. Imbrication is often considered unnecessary and may cause stenosis.

6. Asepsis and Closure: Disinfect the suture line. Close the abdominal wall.

ENTRECTOMY

Enterectomy is a surgical operation consisting of the resection of an intestinal segment followed by an anastomosis to reconstitute the functional structure of the organ. It is indicated whenever irreversible lesions (necrosis, perforation, tumors) are present.

Surgical Steps

1. Laparotomy and Identification: As for enterotomy.

2. Resection:

· Apply Doyen clamps proximal and distal, reinforced with rigid clamps (e.g., Kocher) beyond the resection margins.

· Ligate the mesenteric vessels supplying the segment to be removed. Cut the mesentery in a triangular shape.

· Transect the intestine with a scalpel, collecting septic fluids on antiseptic compresses.

3. Anastomosis:

- Technique: The recommended technique is end-to-end anastomosis using simple interrupted sutures (Jourdan technique). This method minimizes stenosis compared to continuous sutures.
- Suturing: Begin with the first suture at the mesenteric border, tying the knot inside the lumen. Suture the distal half-circle (from mesenteric border to anti-mesenteric border). Close the proximal half-circle by alternating sutures between the mesenteric and anti-mesenteric sides.
- Leak Test: Gently release the proximal clamp while supporting the suture line to check for leaks, especially at the mesenteric border.

4. Closure of Mesenteric Defect: Carefully close the mesenteric breach with a continuous suture to prevent herniation and strangulation.

5. Abdominal Closure.

Postoperative Care

· Continue fluid therapy, antibiotics (penicillin crucial for Clostridial prevention). Administer anti-gangrene serum in large animals, anti-tetanus serum in unvaccinated subjects.
· Careful reintroduction of food to protect the suture line for about 8 days.
· Prokinetics (e.g., sorbitol solution) may help if transit is delayed.

Complications

Peritonitis due to anastomotic leakage, more common with continuous sutures.