Duodenal Catheter

Model Interest
Gastrointestinal catheters are of great interest for repeated infusion directly at a level of interest of the gastrointestinal tract.

Animal Models
- Rats: male/female, any strain*, weight > 200 g. Standard model: male CD 250 g
  *For a few strains (pathological strains or disease models like obese and/or diabetic animals) specific pre- and post-operative care could be needed and will be mentioned by the Surgical Team.

Material
- Standard catheters: sterile polyurethane catheters (ID: 0.635 mm; OD: 1.194 mm); other catheters on demand

Preoperative Preparation
- Anaesthesia: intraperitoneal injection of a ketamine and xylazine mixture or isoflurane
- Preparation of the surgical area: shaving and disinfection with aseptic solution
- Preoperative administration of an analgesic (buprenorphine or others analgesics on demand)
- Preoperative injection of an antibiotic (enrofloxacin) on customer's approval
- Protective gel applied on animal's eyes

Surgical Technique
- A medial laparotomy is performed. The duodenum is identified and a purse string suture is placed in. A small incision is made in the center of the purse string suture. The intestinal catheter tip is then inserted through the incision into the duodenum and advanced up the bead on the catheter. The purse string suture is tied off.
- The catheter is secured to the abdominal wall with a non-resorbable suture. The incision is checked carefully to insure that there is no leakage. The catheter's insertion length into the abdomen is secured by suturing the bid to the muscular wall with non-resorbable sutures. The abdominal musculature is closed with resorbable sutures and the skin incision with wound clips.
- An skin incision is made in the scapular region. The catheter is subcutaneously tunnelled from the abdominal incision to the scapular region then secured by a non-resorbable suture on the back muscles just below the bead of the catheter. The skin incision is closed with a non-resorbable suture or a wound clip. The catheter is rinsed with sterile saline and the catheter end is plugged.

Postoperative Care
- Use of heating pads during animal recovery
- Subcutaneous injection of cold sterile saline for rehydration
- Postoperative administration of an analgesic at Day 1 (buprenorphine or others analgesics on demand)
- Close clinical observation
- Individual housing

For more information, contact us
surgery@eu.crl.com
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Animal Shipment
• Animals are shipped in individual boxes, within 72 hours after surgery
• Specific transport hydrated food is placed in animal shipment boxes

Catheter Use
• Accompanying document: specific sheet including catheter handling procedures

Material and Human Resources
• Two technicians: one gently restraining the animal, the other performing the procedure
• Small haemostatic forceps or specific staple remover, blunt 23G needles, sterile saline solution, injection and/or sampling consumables, 23G plugs

Work on Non Anesthetised Animals
• For models with staple: the wound clip should be removed with a staple remover or haemostatic forceps
• The catheter should be rinsed with sterile saline. The test compounds can then be injected via the catheter.
• When not regularly used, catheters should be rinsed with a sterile saline solution every 48-72 hours

For any information regarding catheter handling and use, please contact Charles River Surgical Services at surgery@eu.crl.com