SUBTOTAL COLECTOMY

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Key Points

- Pay attention to the unique blood supply to the colon
- Increase collagenase activity occurs 5 - 7 days after colotomy/anastomosis
- Colon is a high pressure conduit system
- Subtotal colectomy may be curative for megacolon in cats

If you would like a video of this surgical procedure on DVD, go to **www.videovet.org** or email VideoVet at videovet@me.com.

SURGICAL MANAGEMENT OF MEGACOLON

Clinical presentation: Megacolon is a condition in which the ascending, transverse, and descending colon are chronically large in diameter and filled with inspisated stool. Patients generally present with a history of chronic constipation (i.e., weeks to years), tenesmus, and weight loss. Males are more commonly affected than females and the age ranges from one year to 12 years.

Etiology: The etiology of megacolon is a functional defect of the colonic smooth muscle. It is thought to be either congenital, acquired, or idiopathic. The idiopathic form is the most common type seen in the cat.

Diagnosis: Diagnosis of idiopathic megacolon in cats is usually made on the basis of history, abdominal palpation, and radiography. Confirmation is based on exploratory laparotomy.

Treatment: The decision to operate is generally made on the basis of the constipation becoming progressively worse and responding only to multiple enemas and manual deobstipation. Exhaustive medical therapy is generally performed prior to surgical intervention using a varitey of diets and colonic motility modifiers.

Preoperative management: Preoperative bowel preparation, using antibiotics administered orally or multiple cleansing enemas is probably useless in cases of severe constipation or obstipation. A parenterally administered antimicrobial agent, with a spectrum of activity directed toward coliforms and anaerobes, is probably the most efficacious preoperative management. Compacted stool from chronic obstipation is best removed at surgery rather than trying to remove it pre operatively.

Subtotal colectomy: Subtotal colectomy is the surgical procedure of choice in cats with megacolon. This technique is performed regardless of how much of the colon appears diseased. The surgical objective is to remove all of the colon except what is necessary to reestablish bowel continuity. When the ileocecocolic valve is removed (i.e., which is done if the cecum appears grossly abnormal), a 1.5 - 2 cm segment of descending colon just proximal to the pubis (i.e., colorectal junction) is saved to accommodate the ileo-colonic anastomosis. When the ileocecocolic valve is retained (i.e., which is done if the cecum appears grossly normal), a 1 cm segment of ascending colon is preserved to accommodate the colonic anastomosis.

Several techniques have been described for performing the colonic anastomosis. The author's technique of choice is an end-to-end anastomosis. The procedure is performed using a single layer simple continuous or simple interrupted appositional pattern with 3-0 or 4-0 synthetic absorbable suture. Because of lumen diameter differences between the ileum and colon, it is necessary to place several sutures in the larger diameter bowel (i.e., colon) in order to create similar size lumen diameters thus resulting in a watertight anastomosis.

After the anastomosis is completed, the peritoneal cavity is thoroughly lavaged with 200 - 300 ml/kg of warm, sterile physiologic saline solution prior to closure. In situations where the anastomosis is under any question, particularly with respect to color and blood supply (i.e., tissue viability), it is advisable to place an omental patch over the anastomotic area to help provide a source of blood supply and lymphatic drainage, as well as to help support the anastomosis.

Postoperative care: Immediately postoperatively patients should be supported with a balanced electrolyte solution intravenously until they are able to maintain their hydration status. Antimicrobial treatment is generally continued for five to seven days post operatively. Patients are returned to their normal diet within 24 hours and allowed water ad libitum.

Results: Long term results have been somewhat variable from case to case, but generally:
1) patients generally maintain fecal continence post-operatively.
2) after a 10-15% weight loss 2 - 3 weeks postoperatively, body weight is regained within 3 - 7 weeks
3) watery to mucoid stools occur during the first 3 - 7 weeks followed by mucoid to semi-solid to formed stools by 3-6 months. This is thought to be due to ilieal adaptation thus allowing efficient water absorbtion.
4) frequency of stools is approximately six per day initially followed in 1-2 months by four per day, then at six months to 2-3 stools per day (range 1-4 stools per day).
5) owner satisfaction has been excellent in the majority of cases.