TOTAL/SUB-TOTAL COLECTOMY:
Usually in cats, usually due to megacolon, much like Elvis

Synopsis-- Anatomy and the Disease

When a neurologic or obstructive process impedes normal forward movement of stool in the colon, the physiologic process of water removal from fecal matter continues unabated. What results is large volumes of inspissated, clay-like stool in a very large diameter colon/rectum in a very unhappy patient. When they present to us veterinary professionals, what results is very unhappy staff.

The most common patient is the middle aged/geriatric cat with chronic history of progressive constipation that is becoming refractory to soluble fiber treatment, motility medications and repeated enemas and deobstipation procedures. Normal radiographs and normal biochemistry are typical, outside the obvious colon changes and perhaps signs supporting dehydration.

A less common patient is one with a history (or unknown history) of pelvic trauma. Regardless of the wacky anatomy that can result from pelvic fracture malunions, this theoretical cause infrequently comes to fruition as a full-blown obstipation scenario. A more frequent true cause may be the neurologic trauma that is comorbid with pelvic trauma (i.e. sacral fracture, tail-pull injury, spinal luxation, etc.)

The decision to take all of the colon (including ascending) and/or cecum is based on the extent of the disease. If the dilation is dramatic up to the cecum, I take as much as reasonable, balancing the anastomotic challenges of rectum to colonic remnant/cecum/ileum. The drawback to taking the cecum is the loss of the ileocecocolic valve that may act theoretically as a barrier to liquid stool, bacterial overgrowth, etc. and higher risk of chronic loose stool/diarrhea. The (sometimes) benefit of taking these structures is a more secure/safe anastomosis and lower risk of dehiscence.

Surgical Overview:

For a total/subtotal colectomy, the abdomen is approach routinely at midline—fairly large, stem to stern. The colonic vasculature is ligated/transected to isolate the offender. After packing off the region, the resection is made, and the ileal or colonic remnant is anastomosed to the rectum just cranial to the pubic brim. Local lavage reduces local contamination, and omentum is recruited for clean-up. Closure is routine.

Depending on level of preoperative debilitation, being a cat (usually), the patient may benefit from a tube-method of feeding. Esophagostomy is my usual go-to for that and can be performed under the same anesthesia in anticipation of anorexia postop. E-tubes add their own morbidity, so risk:benefit and lucky guess work discussions should be had with owners preoperatively.

The **indications & rationale** for surgical treatment are:

- Intractable obstipation
- Progressive constipation/obstipation

Other options for treatment (besides surgery) are:

- High levels of soluble fiber in diet (“prebiotics”; classically canned pumpkin/squash, but other cooked fruit/vegetables are options too for variety or preference.)
- High water content in diet
- Subcutaneous fluids, as supplement when poorly controlled dehydration

- Probiotics
- Cisapride, promotility medication
- Manual rectal/colonic evacuation under anesthesia

Supportive/ancillary options with surgical treatment are:

- Feeding tubes (E-tube, NG tube, PEG tube, in order of preference for temporary use)

The **perioperative experience** for pet and owner includes:

- Surgery prior to next episode of severe debilitation
- Surgery prior to manual colonic evacuation (i.e. surgery WITH full colon, not immediately after other procedure)
- Some degree of nursing/supportive care (in home or in clinic/24-hr facility) to manage until orally tolerant to food, water, antibiotics, pain medications
- Close monitoring for signs of peritonitis, with potential for frequent return visits evaluating for same
- Patients with a colectomy will defecate more frequently, 2-3x daily vs. 1x daily for example.
- Longterm hygiene monitoring and perineal grooming to maintain optimal hygiene

Expectations for outcome are:

- Stool character unlikely to be firm; most common loose to cowpie; occasionally overt diarrhea
- Stool character will change/improve with time and physiologic accommodation
- Dietary trials to optimize stool character will be necessary (2-3wks of each trial)

Complications that may arise with this procedure are:

- Peritonitis secondary to surgical contamination or progressive dehiscence (rare; life-threatening, requiring re-operation)

  **Monitoring includes: noting anorexia, depression/reclusiveness; tense/painful/fluid-like abdominal palpation; fever; significant/progressive septic abdominal fluid (belly tap)

- Incisional infection (rare; minor, requiring topical wound management and/or antibiotics)

Postoperative **outcomes may be poor** due to the above complications, and/or:

- Intractable diarrhea resulting in dehydration, nutritional losses
- Altered/inappropriate litterbox habits

What a **surgeon needs** prior to surgery:

- Skin near the surgery site CLEAR of infection (papules, pustules, crusts, collarettes, etc.) If urgent surgery, owner must be alerted to *increased risk* of incisional, deep and/or implant infections.
- No colonic/rectal procedures within 5-7d of surgery
- No enemas within 5-7d of surgery
- Clear planning regarding the additional placement of feeding tubes

General considerations and complications *for all surgery/anesthesia procedures are:*

- *Difficult and/or painful anesthetic recovery (variable; may require additional medications or re-hospitalization)*
- *Incisional infections (rare, minor; usually require oral antibiotics)*
- *Incisional dehiscence (rare, minor or major; may require surgical revision)*
- *Adverse anesthetic event (rare, major; may result in serious impairment or death)*

Proper owner expectations are important to a successful experience and patient outcomes. Please discuss this information with your clients while assisting them with decision-making for **Colectomy**.

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