THE UNIVERSITY of EDINBURGH
The Royal (Dick) School of Veterinary Studies

WHAT IS YOUR DIAGNOSIS?

A twelve-year-old, female neutered Domestic Short-Haired cat was presented to the R(D)SVS Internal Medicine service for investigation of a two-year history of intermittent self-resolving episodes of constipation, progressively worsening in frequency over the previous six weeks and associated with tenesmus, dry and small-sized faeces, haematochezia, lethargy, inappetence and vomiting. Enemas, a laxative and a prokinetic prescribed by the referring veterinary surgeon had provided partial and short-lived improvement. Physical examination revealed sinus arrhythmia, normal hydration status and a moderately distended colon with firm faeces on abdominal palpation.

1) ***What are your differential diagnoses for constipation with tenesmus?***

2) ***How would you evaluate this case further?***

3) ***How would you treat and monitor this cat?***

1. Differential diagnoses for constipation with tenesmus

Colonic disease	*Rectoanal disease*	*Extraluminal compression*	*Other factors*

• Neoplasia
• Hypomotility
  o Metabolic (hypokalaemia, hypercalcaemia)
  o Neurological (idiopathic megacolon; dysautonomia)
• Colitis
• Diverticulum/cyst
	• Anal sacculitis
	• Proctitis
	• Neoplasia
	• Polyp
	• Foreign body
	• Stricture
	• Perianal fistula
	• Perineal hernia
		• Pelvic fracture
		• Neoplasia
		• Sacral spinal cord malformation
		• Sublumbar lymphadenomegaly
		• Prostatomegaly
		• Pseudocoprostasis
		• (Pyo)granuloma
			• Diet
			  o Low in fibre
			  o High in indigestible material (hair or bones)
			• Dehydration
			• Lack of exercise
			• Weakness
			• Opioid analgesia
			• Hypothyroidism

2. Further evaluation

Given the species and patient's demeanour, rectal exam was performed under general anaesthesia, after initial investigations. Routine haematology and serum biochemistry (including ionised calcium and total T4) revealed mild azotaemia, which combined with an inappropriate urine concentration, was suspected to be renal in origin. No relevant abnormalities were noted on the remainder of the urine analysis, as well as urine protein:creatinine ratio, urine culture and blood pressure. Abdominal and thoracic radiography showed colonic distension. Abdominal ultrasonography revealed normal colonic wall dimensions, as well as bilateral mild loss of renal corticomedullary distinction. Rectal exam confirmed the presence of a rectal stricture, one centimetre proximal to the anus.

3. Treatment and monitoring

Under the same anaesthetic, balloon dilatation of the rectal stricture was performed successfully under fluoroscopic guidance (Figure 1). Immediately after the interventional procedure, colonoscopy and proctoscopy were performed, showing no relevant abnormalities apart from the expected circumferential tear at the stricture site. Endoscopic biopsies revealed normal colonic mucosa, and presence of moderate suppurative proctitis, fibrosis and dysplasia, in the region adjacent to the rectal stricture. The patient was diagnosed with presumptive idiopathic chronic colonic dysmotility and concurrent rectal stricture, the latter suspected secondary either to previous mechanical injury or ongoing proctitis. In addition to initial intravenous fluids and analgesia, treatment included oral prednisolone for one month in a tapering fashion, combined with a long-term high fibre diet, as well as adjusted doses of oral cisapride and lactulose. A good response was documented, with improved demeanour, as well as normal defecation regarding frequency and size. No recurrence has been reported to date, two months post-balloon stricture dilatation and maximised medical management.

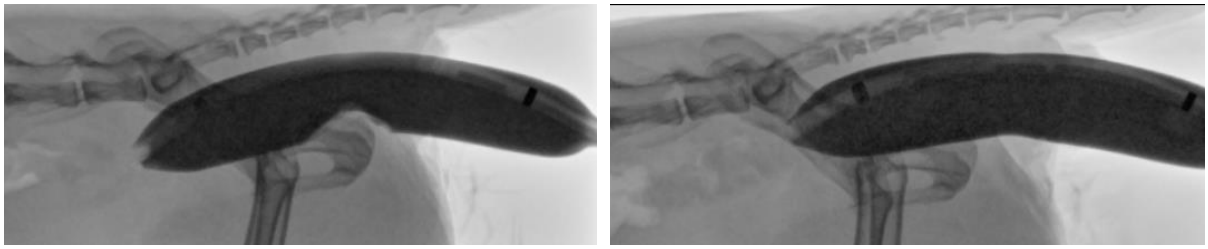

Figure 1: balloon dilatation of rectal stricture in a 12-year-old cat, under fluoroscopic guidance. Right lateral images obtained post-dilatation with a 22mm balloon, after which a residual stricture could still be palpated. Therefore, a 30mm balloon was subsequently used. *Left:* 30mm balloon inflation prior to stricture effacement, demonstrating residual stricture. *Right:* full dilatation with 30mm balloon, confirming maximum effacement of the stricture.

Discussion

A multimodal approach is fundamental to manage chronic constipation. Early identification of underlying diseases is imperative, given the risk of subsequent permanent loss of smooth muscle function and development of megacolon refractory to medical treatment and requiring colectomy. Rectal strictures can be inflammatory, congenital, neoplastic, and secondary to trauma or to radiation therapy. Benign fibrotic rings are usually managed with balloon dilatation under fluoroscopic/endoscopic guidance, though other techniques are described, namely combination with intralesional triamcinolone injections, or stricture effacement with digital bougienage. Cats with idiopathic colonic dysmotility usually respond to chronic management with a combination of dietary modification, colonic prokinetics and laxatives. Recently, a specific probiotic has also showed promising results in a pilot study.

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