

Ma questo paziente è davvero costipato? Casi clinici che ci fanno riflettere



Giliola Spattini
DVM, PhD, DECVDI

Tigro, Europeo, MN, 6 years

- Lethargic
- Not eating
- Not sure if He is poeing



RADIOGRAPHIC DIAMETER OF THE COLON IN NORMAL AND CONSTIPATED CATS AND IN CATS WITH MEGACOLON

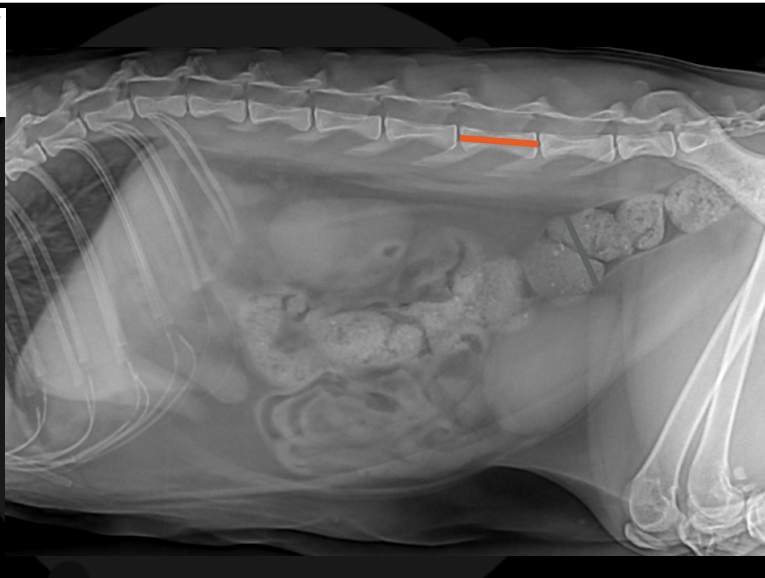
TIM TRIVAIL, DANIELLE GUNN-MOORE, INÉS CARRERA, EMELY COURCIER, MARTIN SULLIVAN

Radiographs of 50 cats with no history of gastrointestinal disease were evaluated to establish a normal reference range for radiographic diameter of the feline colon. Thirteen cats with constipation and 26 with megacolon were also evaluated and compared with the normal cats to characterize the accuracy of the reference range and to identify a cutoff to distinguish constipation from megacolon. A ratio of maximal diameter of the colon to 1.5 length was the most repeatable and accurate measurement. A ratio <1.28 is a strong indicator of a normal colon (sensitivity 96%, specificity 87%). A ratio >1.48 is a good indicator of megacolon (sensitivity 77%, specificity 88%). © 2011 Veterinary Radiology & Ultrasound, Vol. 52, No. 7, pp. 517-521

A:B < 1,28 normal

A:B > 1,48 Megacolon

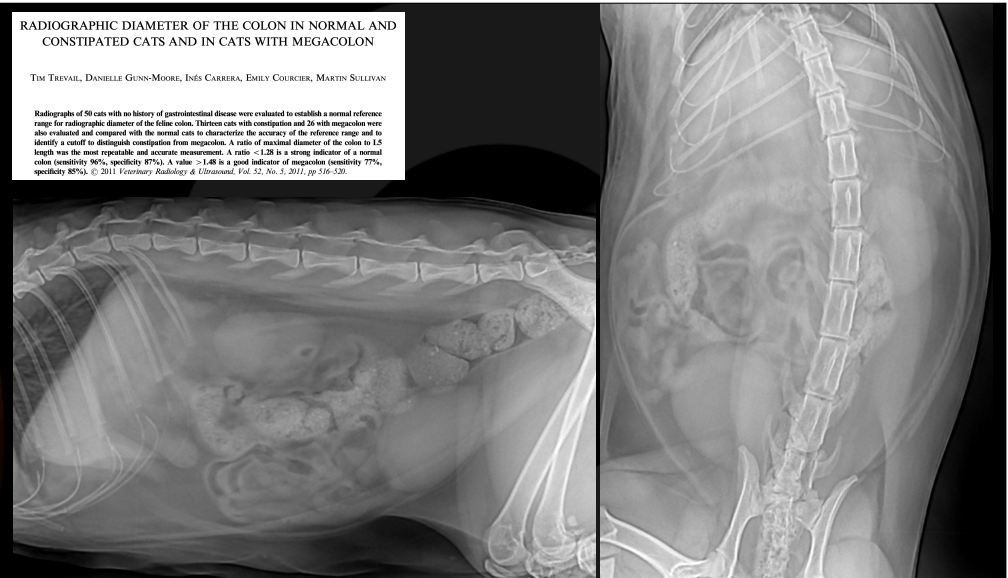
Tigro, MN, 6 years



RADIOGRAPHIC DIAMETER OF THE COLON IN NORMAL AND CONSTIPATED CATS AND IN CATS WITH MEGACOLON

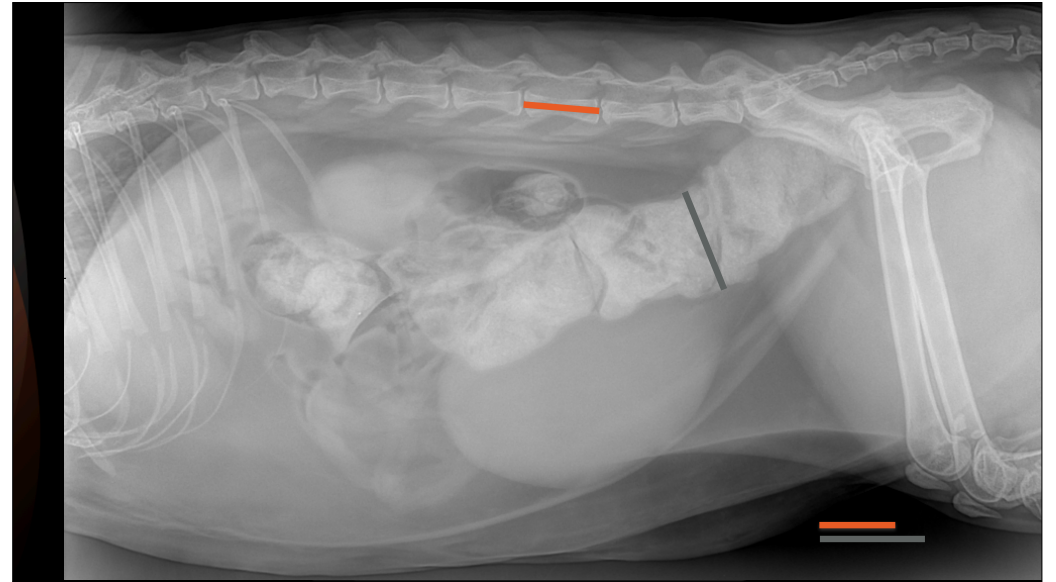
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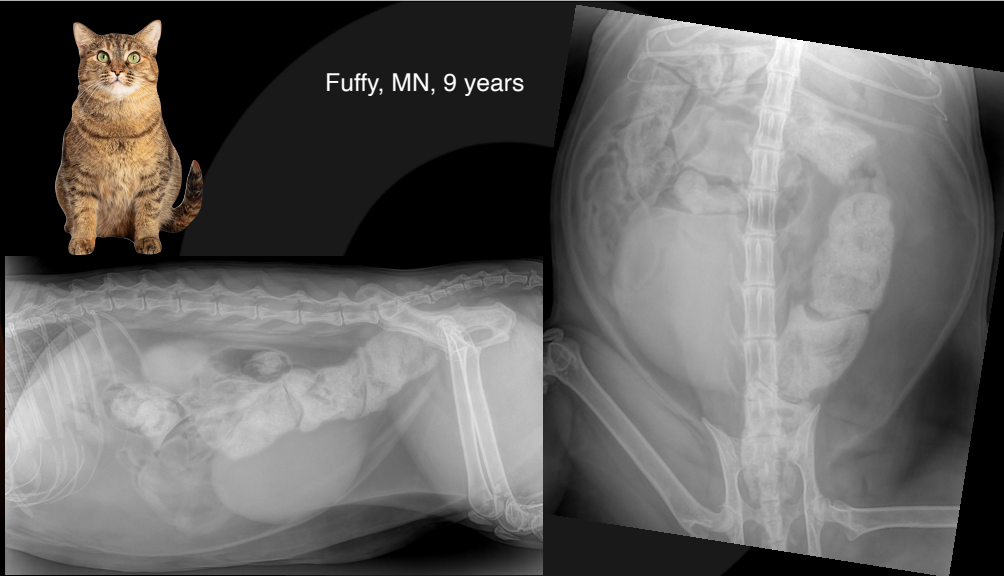


Fuffy, Europeo, MN, 9 years

- Not pooping
- Not eating
- Lethargic



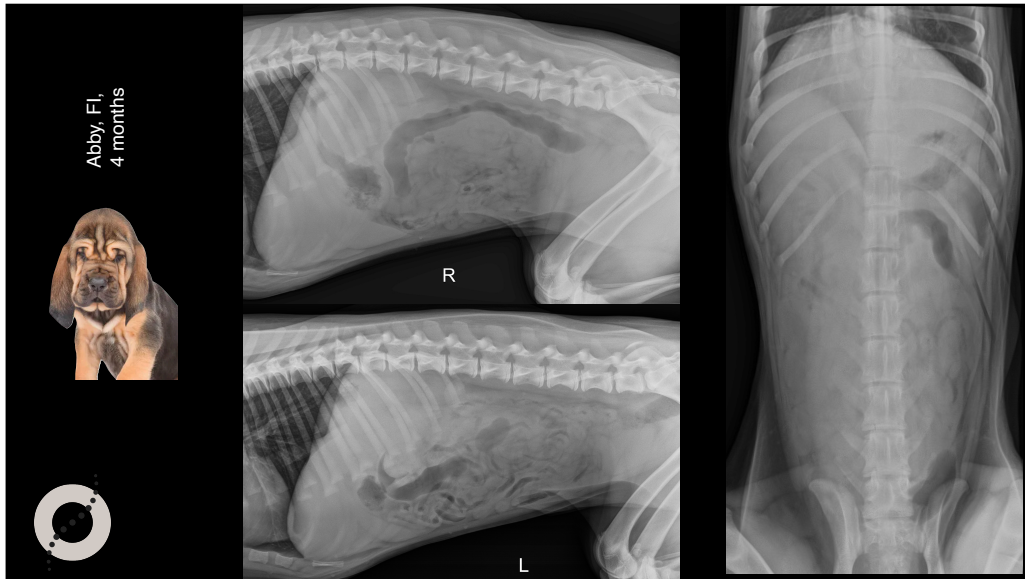
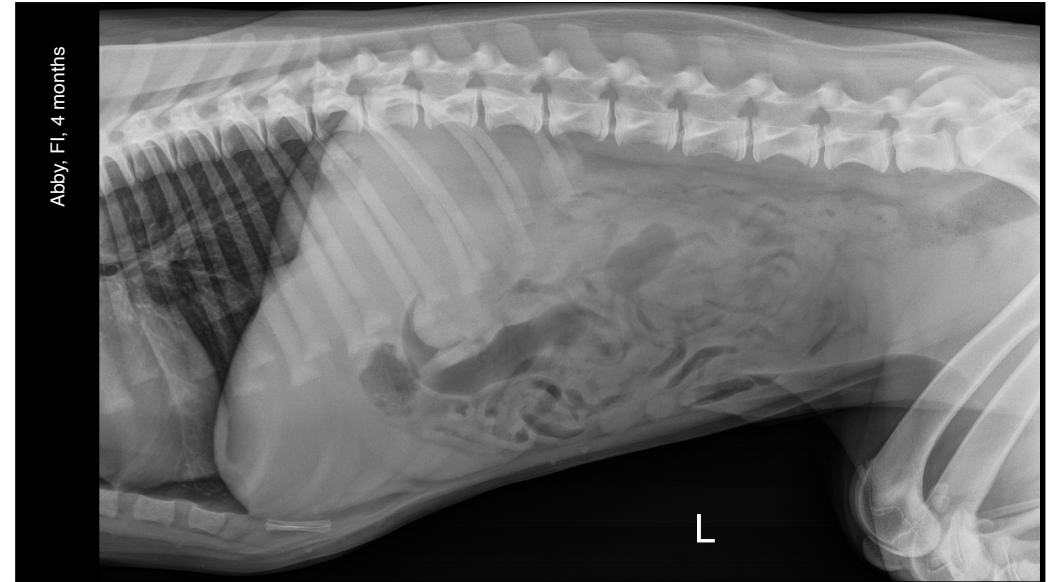
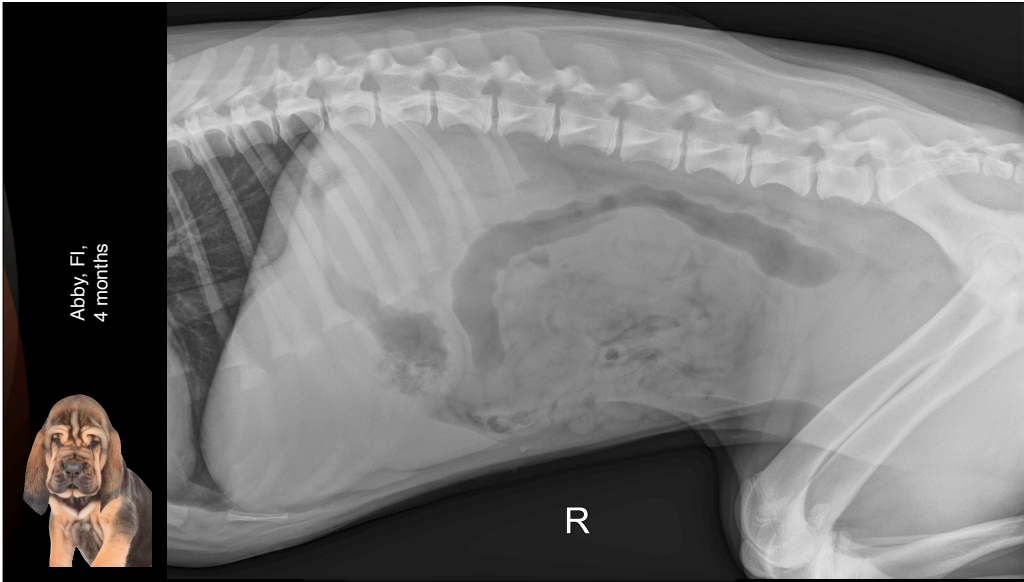
Fuffy, MN, 9 years



Abby, Bloodhound, FI, 4 months

- Two days of watery diarrhea progressed to hemorrhagic
- Small worms in the stool
- Today anorexic but still active



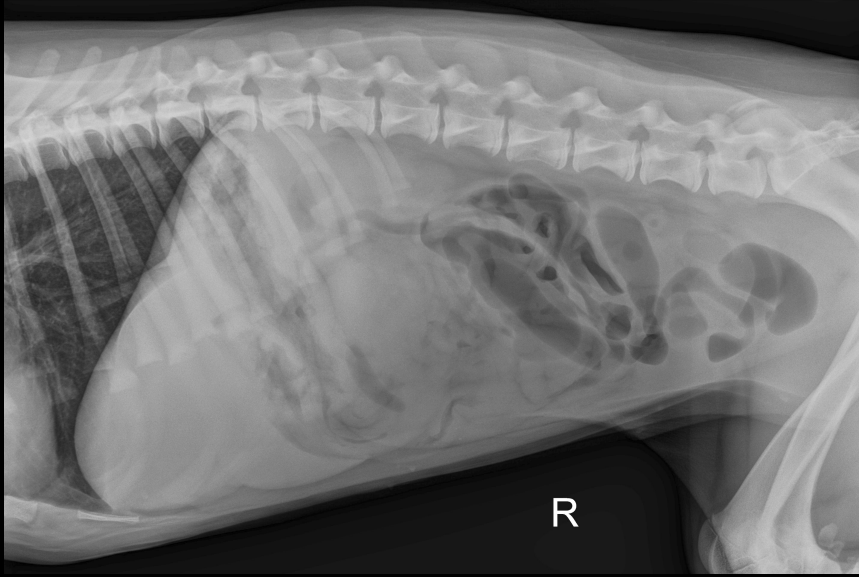


Abby, Bloodhound, FI, 4 months

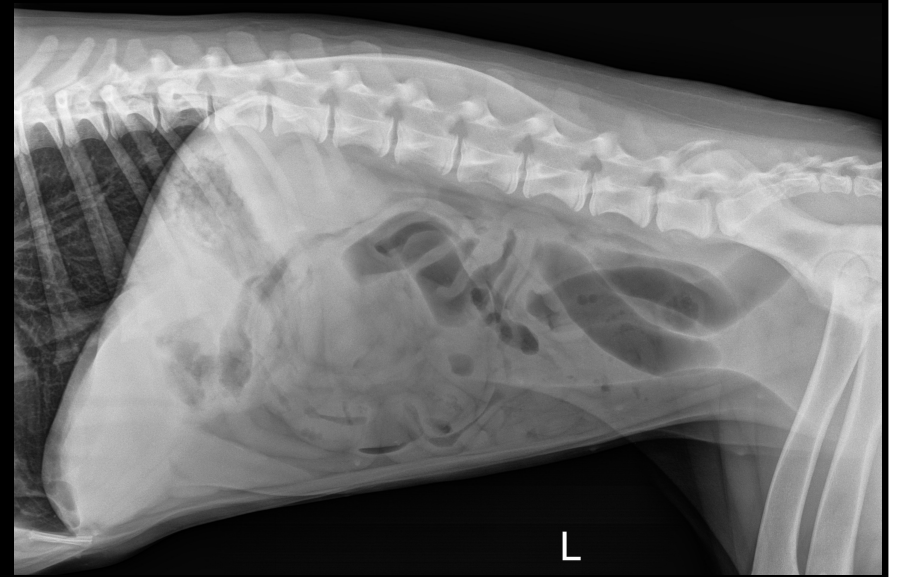
- More active under fluid
- One bout of hemorrhagic stools
- Recheck two hours later

A portrait of a Bloodhound puppy, looking directly at the camera. The puppy has characteristic large, floppy ears and a wrinkled face.

Abby, FI,
4 months
Two hours later



Abby, FI,
4 months
Two hours later



Abby, FI,
4 months
Two hours later

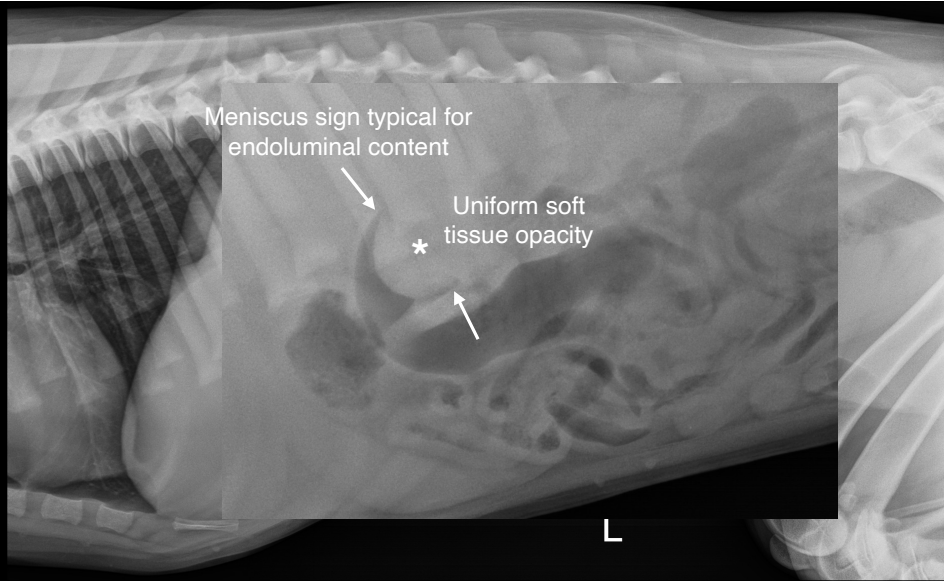


Your evaluation

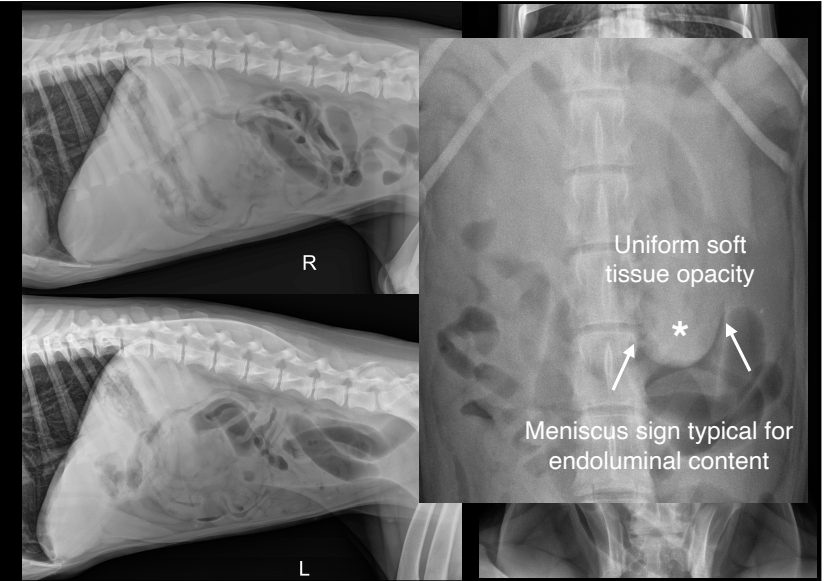
- Is there a foreign body?
- Is there gastroenteritis?
- Is there a gastrointestinal occlusion?



Abby, FI, 4 months



Abby, FI, 4 months
Two hours later



Key points

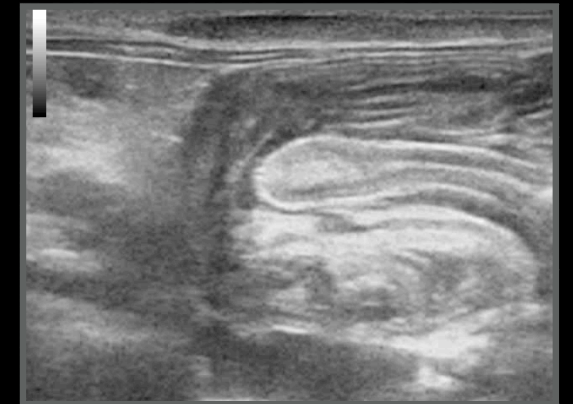
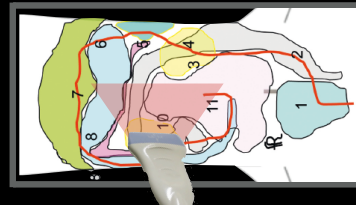
- Typical clinical signs
- Meniscus sign
- Soft tissue opacity

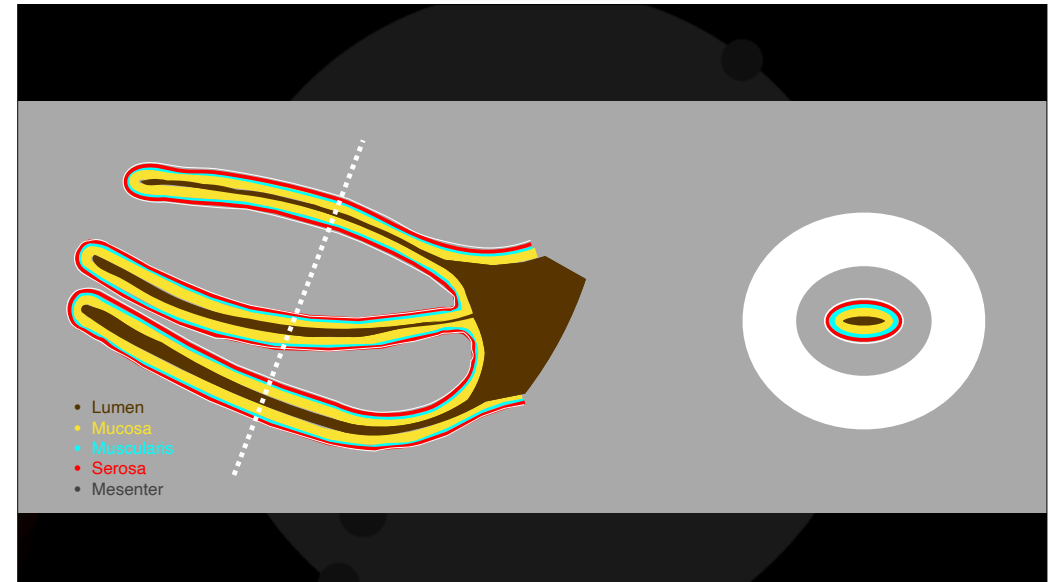
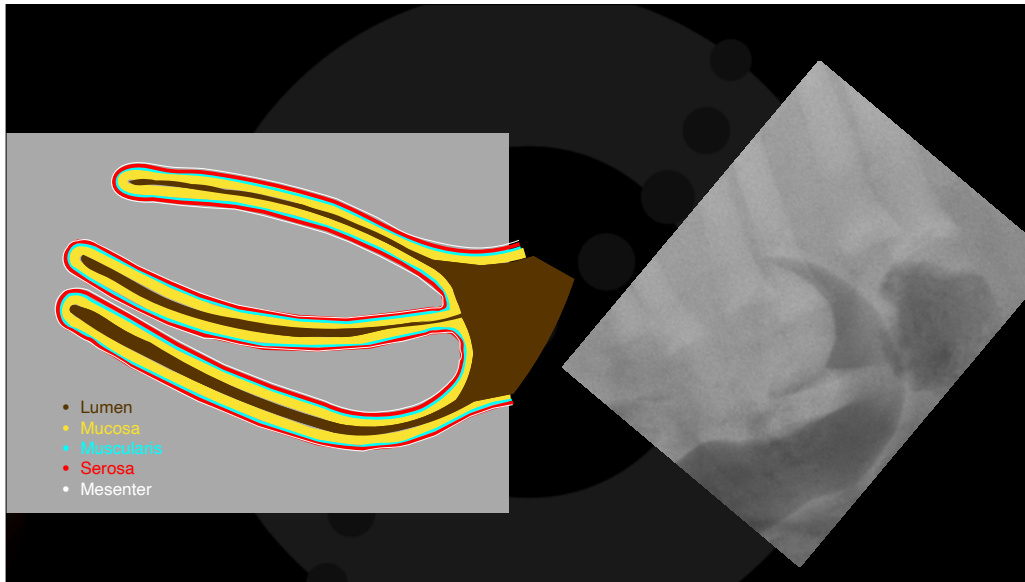


Abby, FI, 4 months

Another patient, to show the position of the probe

11





Scout, English Setter, MI, 2 years

- Dysorexia
- Eat grass
- Generalises tremor
- Abdominal pain



Scout, MI, 2 years

Blood works



RBC (milioni / μ L) :	8.16	5.70	8.56	Acanthociti:		Elipitociti:	
HGB (g/dL) :	19.0	14.1	21.2	Anisocitosi:		Ipocromia:	
HCT (%) :	53.6	39.0	59.2	Agglutinazione:		Macrofili:	
MCV (fL) :	65.7	63.1	72.6	Codociti:	+	Microfili:	
MCH (pg) :	23.3	21.8	25.4	Cheratociti:		Parasitii eritrocitari:	
MCHC (g/dL) :	35.4	33.3	36.8	Chizociti:		Policromasia:	
CHCM (g/dL) :		34.3	37.8	Corpi di Heinz:		Punteggiature basofili:	
MCHC/CHCM:		0.94	1.01	Corpi di Howell-Jolly:		Rouleaux:	
CH (pg) :		23.0	26.0	Cristalli di Hb:		Schiatoцитi:	
CHDW (ng) :		2.72	3.34	Dacriociti:		Selenociti:	
RDW (%) :	14.8	11.6	14.7	Drepanociti:		Sferociti:	
HDW (g/dL) :		1.63	2.22	Eccentricociti:		Stomatociti:	
NRBC/100 WBC:	0	0	0	Echinociti:		Torociti:	
Varie RBC:				Linfociti attivati:			
WBC (x 1000 / μ L) :	12.9	5.45	12.98	Linfociti atipici:			
Conta corr. WBC (x 1000 / μ L) :		5.45	12.98	Neutrofili tossici:			
Mielociti (/ μ L) :	0	0	0	Corpi di Doehle:			
Metamielociti (/ μ L) :	0	0	0	Schiumosità citopl.: :			
Neutrofili banda (/ μ L) :	0	0	286	Vacuolizzazione citopl.: :			
Neutrofili segmentati (/ μ L) :	11808	3555	3914	Basofilia citopl.: :			
Linfociti (/ μ L) :	387	1169	3810	Granuli tossici:			
Monociti (/ μ L) :	516	186	798	Neutrofili giganti:			
Eosinofili (/ μ L) :	129	104	1164	Macropoliciti:			
Basofili (/ μ L) :	0	0	106				
Danneggiate (/ μ L) :	0	0	0				
Indifferenziate (/ μ L) :	0	0	0				
Altre (/ μ L) :	0	0	0				
Varie WBC:				Stima PLT:	ADEG: <input checked="" type="checkbox"/> INADEG: <input type="checkbox"/> AUMENT: <input type="checkbox"/>		
PLT (1000 / μ L) :	353	176	479	Varie:	Plastine attivate: <input checked="" type="checkbox"/> Macroplastine: <input type="checkbox"/>		
MPV (fL) :	7.6	8.9	15.0	Plastine allungate: <input type="checkbox"/> Inclusi plastrinici: <input type="checkbox"/>			
PCT (%) :	0.267	0.21	0.52	Note:			
PDW (%) :	16.2	51.8	74.5				
MPC (g/dL) :		19.1	24.4				
PCDW (g/dL) :		4.1	8.2				
MPM (pg) :		1.70	2.58				
PMDW (pg) :		0.65	1.02				
Large PLT (1000 / μ L) :		7	63				
				Emoparassiti:	NEG.	NEG.	NEG.
				Proteine plasmatiche	(g/dL) :	5.7	7.1
				Fibrinogeno (mg/dL) :		152	294
				Aptoglobina (mg/dL) :		1	96
				Prot. C Reattiva (mg/dL) :		0.01	0.22
				VES (mm/h) :		2	4
				VES Corretta (mm/h) :		2	4

Scout, MI, 2 years

Blood works



CPK (IU/L):	177	42-155	pH:	7.481	7.36	7.49
AST (IU/L):	54	20-50	pCO2 (mmHg):		35.0	45.0
ALT (IU/L):	77	15-50	pO2 (mmHg):	46.3	35.1	54.3
ALP (IU/L):	168	20-110	Na+ (mmol/L):	142.4	135	145
GGT (IU/L):	6.9	1-11	K+ (mmol/L):	3.42	3.65	4.7
Colinesterasi (IU/L):		3347-7074	Ca++ (mmol/L):	1.24	1.25	1.5
Bilirubina Totale (mg/dL):	0.39	0.15-0.4	Cl- (mmol/L):	98.2	110	118
Proteine Totali (g/dL):	8.1	5.5-7.5	LaI (mmol/L):	2.8	0.5	2.5
Albumine (g/dL):	4.1	2.7-3.6	Hct (%):	34.0	36	51
Globuline (g/dL):	4.0	2.6-3.9	HCO3- (mmol/L):		17.5	26.4
Rapporto A/G:	1.03	0.7-1.2	TCO2 (mmol/L):		17.5	20
Colesterolo (mg/dL):	191	150-350	BEb (mmol/L):		-3	+3
Trigliceridi (mg/dL):	24	30-110	BEaI (mmol/L):		-6.6	+2.7
AMILASI (IU/L):	427	300-1800	SBC (mmol/L):			
LIPASI (IU/L):		121-725	sO2e (%):			
Urea (mg/dL):	44	18-45	Ca++ (pH 7.4) (mmol/L):			
Creatinina (mg/dL):	0.96	0.75-1.3	Gap Anionico (mmol/L):		12	20
Glucosio (mg/dL):	149	60-100	A-aDO2 (mmHg):			
Calcio (mg/dL):	9.8	8.2-12	Ri:			
Fosforo (mg/dL):	4.9	2.1-6.2	pAO2 (mmHg):			
Magnesio (mg/dL):		0.67-0.94	paO2 / pAO2:			
Sodio (mEq/L):	141	143-151	pO2 / FiO2:		221.4	
Potassio (mEq/L):	3.2	3.9-5.1	THb (g/dL):		17.9	
Rapporto Na/K:	44.1	28.5-37.4	O2cap (Vol%O2):		24.9	
Cloro (mEq/L):	97	109-118	Bun (mg/dl):		19.0	22
Cloro corretto (mEq/L):	100.4	109.1-115.9	Crea (mg/dl):		1.0	2.0
HCO-3 (mmol/L):		18.4-24.8	Glu (mg/dl):		136.0	77
Divario Anionico:		13.1-19.4	MG++ (mmol/L):		0.6	0.30
Osmol. sier. calc. (mOsm):	281	277-291	Note:			
Ferro totale (ug/dL):	135	100-200	urea: 40.7 mg/dl			
UIBC (ug/dL):		182-306				
TIBC (ug/dL):		318-479				
Saturazione (%):		28.2-56.8				
Prot. C Reattiva (mg/dL):	1.65	0.01-0.22				

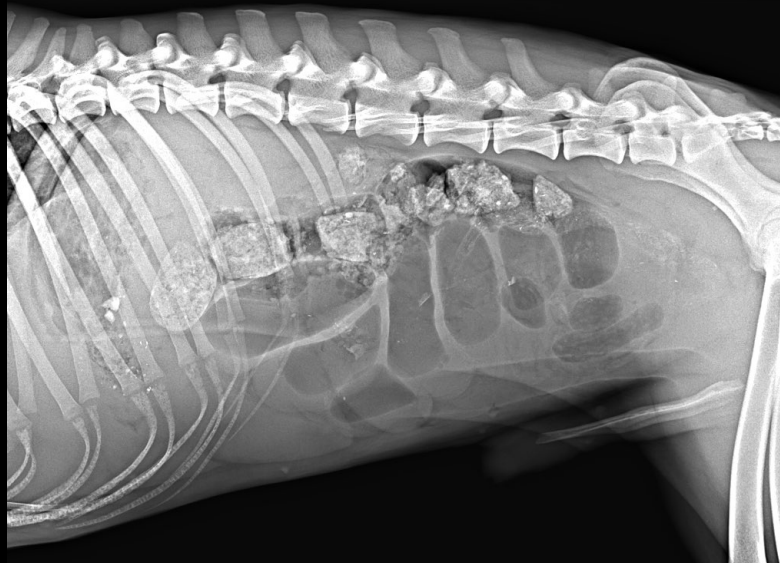
Suspected acute-chronic enteritis

Suspected acute hepatitis
or reactive hepatitis

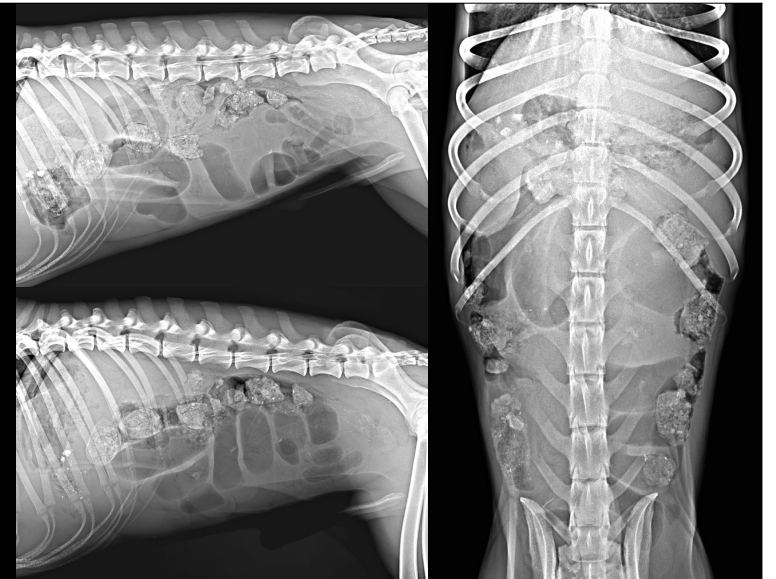
Scout, MI,
6 years



Scout, MI,
6 years



Scout, MI,
6 years

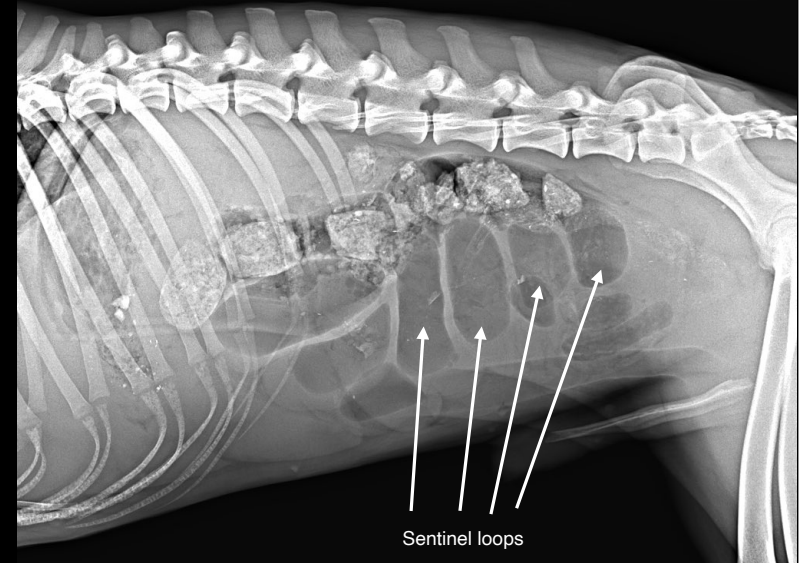


Your evaluation

- Is there a foreign body?
- Is there gastroenteritis?
- Is there a gastrointestinal occlusion?

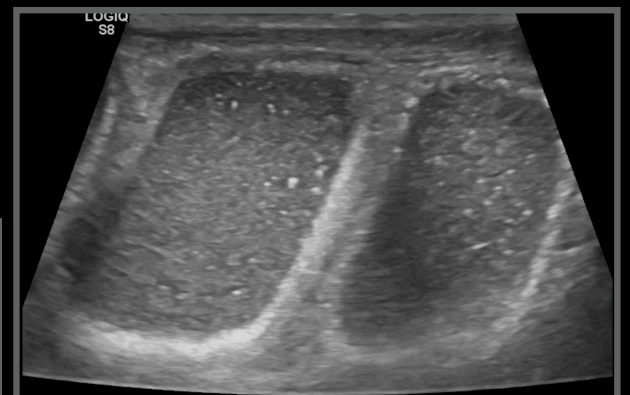
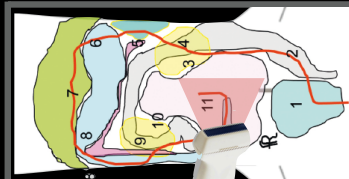


Scout, MI,
6 years

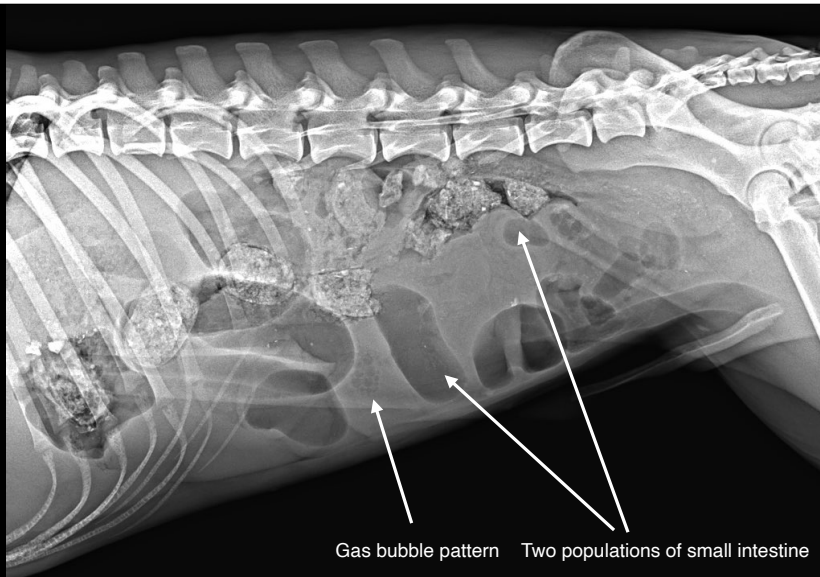


Scout, MI, 2 years

Probe position in a different patient



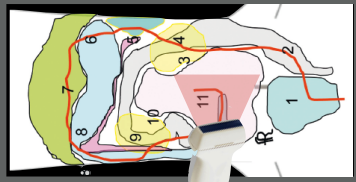
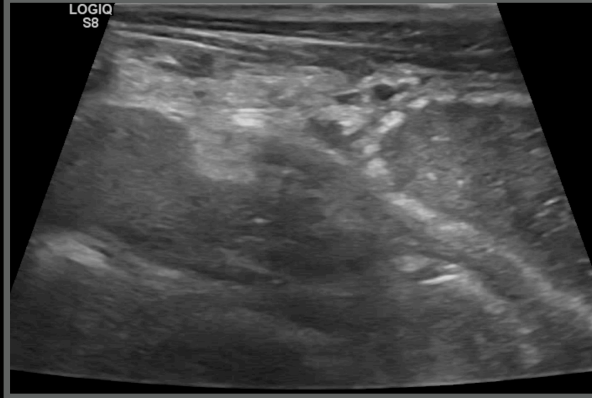
Scout, MI,
6 years



Scout, MI, 2 years

Probe position in a different patient

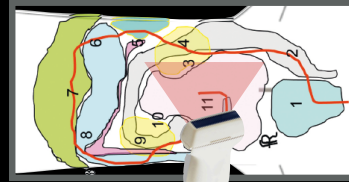
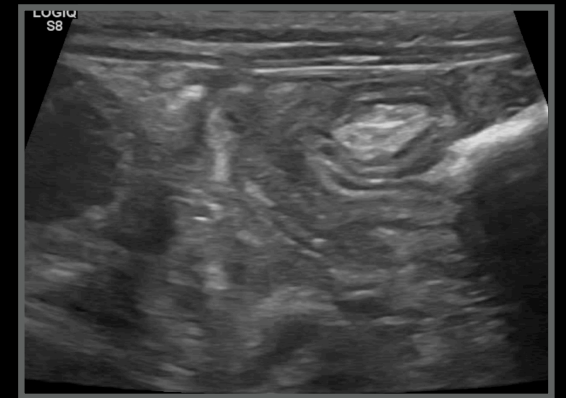
11



Scout, MI, 2 years

Probe position in a different patient

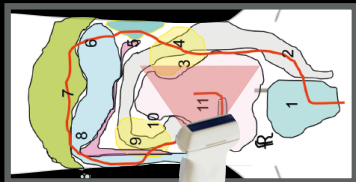
7-11



Scout, MI, 2 years

Probe position in a different patient

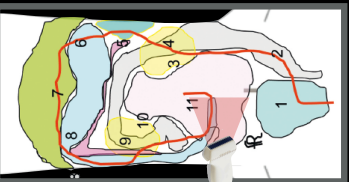
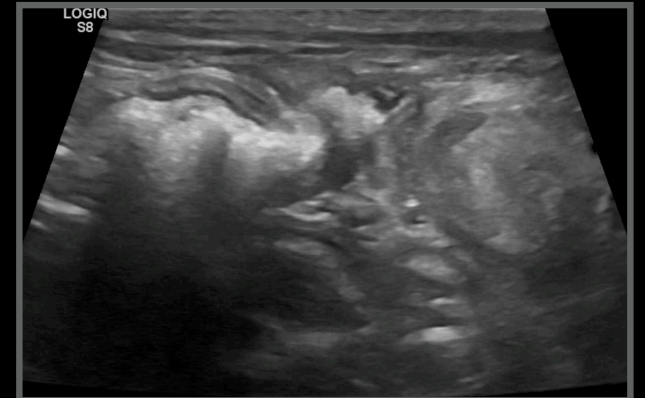
7-11



Scout, MI, 2 years

Probe position in a different patient

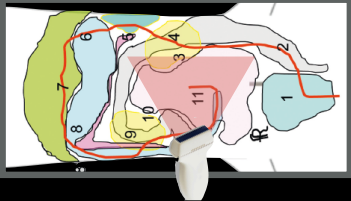
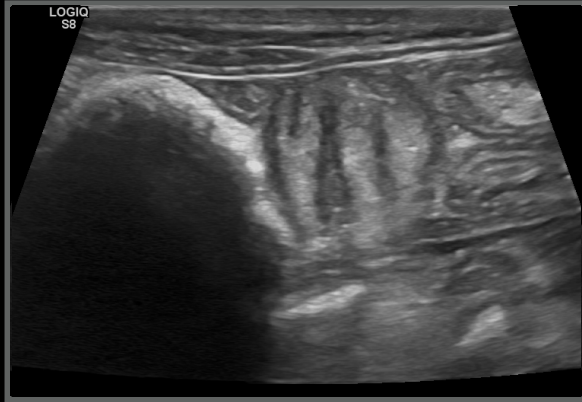
7-11



Scout, MI, 2 years

Probe position in a different patient

7-11



Your evaluation

- Is there an intestinal foreign body?
- Is there intussusception?
- Is there acute gastroenteritis?

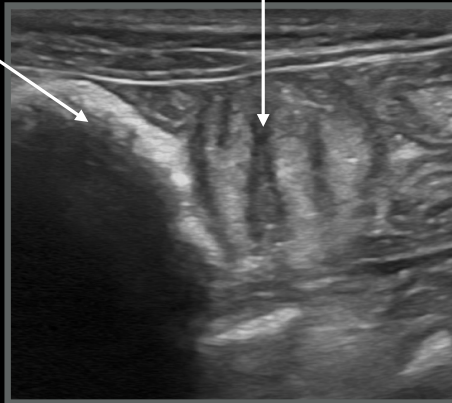
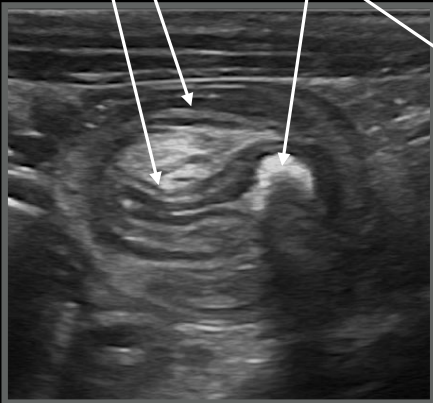


Multilayering

Scout, MI, 2 years

Hyperechoic interface with clean acoustic shadowing

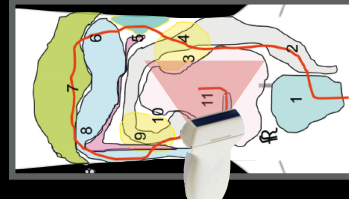
Plication



Scout, MI, 2 years

Probe position in a different patient

7-11

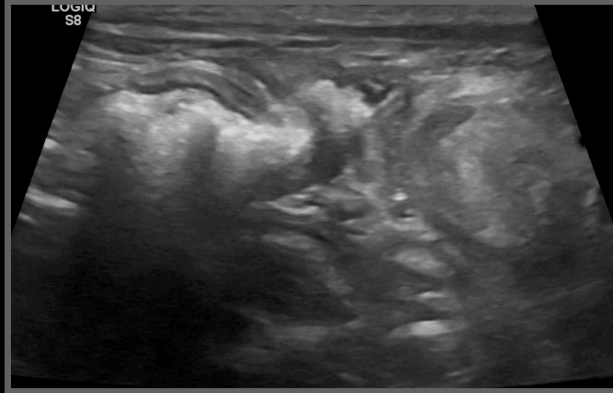
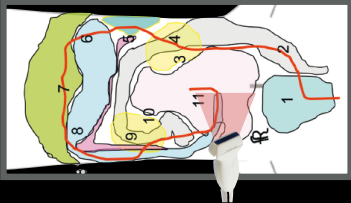




Scout, MI, 2 years

Probe position in a different patient

7-11



Scout, English setter, MI, 2 years

Ultrasonographic diagnoses:

- Acute gastroenteritis
- Linear foreign body
- Intussusception
- Minimal abdominal effusion-reactive peritoneum



How to arrive to Conclusions:

- PE examination
- Blood works
- Ultrasonographic findings
- Literature



Review > Top Companion Anim Med. 2019 Dec;37:100360. doi: 10.1016/j.tcam.2019.100360. Epub 2019 Sep 11.

Current Views in the Diagnosis and Treatment of Intestinal Intussusception

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Affiliations + expand

PMID: 31837757 DOI: 10.1016/j.tcam.2019.100360

Intestinal intussusceptions most often occur in young dogs and cats. Common locations for intestinal intussusceptions include enterocolic, eneteroenteric or colocolic. Ultrasonography is highly reliable for diagnosing of intussusception and for prediction of its reducibility. Abdominal structures that may mimic intussusception can be seen ultrasonographically. Intussusceptions is a surgical emergency. Immediate stabilization of the animal followed by manual reduction or intestinal excision of the affected intestine through midline celiotomy are required. Recurrence is a common postsurgical complication. Enteroplication may be considered for recurrence prevention but is not without complications. Prognosis is good in uncomplicated cases.

ORIGINAL ARTICLE *Veterinary Surgery* 2020;1-9. WILEY

Clinical findings and outcomes of 153 dogs surgically treated for intestinal intussusceptions

Results: Dogs had a median age of 10 months (range, 2-156), and the most common location for intussusception was ileocolic (66/153 [43%]). Most cases had no identifiable cause (104/155 [67%]). Intestinal resection and anastomosis (IRA) was performed in 129 of 153 (84%) dogs; enteroplication was performed in 28 of 153 (18%) dogs, including 13 with and 15 without IRA. **Intraoperative complications occurred in 10 of 153 (7%) dogs, all involving intestinal damage** during attempted manual reduction. The median duration of follow-up after discharge was 334 days (interquartile range, 15-990; range, 1-3302). **Postoperative complications occurred in 53 of 153 (35%) dogs, including 22 of 153 (14%) with severe (grade 3 or 4) events.** Diarrhea, regurgitation, and septic peritonitis were the most common postoperative complications; intussusception recurred in four of 153 (3%) dogs, all within 72 hours postoperatively. **Fourteen-day postoperative mortality rate was 6%.**

Conclusion: Surgical treatment of intestinal intussusception was curative in most dogs, even when an underlying cause was not identified. **Surgical complications were common, including a 14% risk of life-threatening short-term complications.**

Clinical significance: Surgical treatment of intestinal intussusception offers an excellent prognosis, but the potential life-threatening complications should be considered.

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	Manual reduction	MR + enteroplication	Resection + Anastomosis
Complications	MR, n = 10, n (%)	MR + EP, n = 9, n (%)	IRA, n = 105, n (%) ^a
Grade 3—Severe complication^e			
Septic peritonitis due to intestinal dehiscence	0	0	4 (4)
Recurrent intussusception	0	2 (22)	1 (1)
Intestinal obstruction due to adhesions	0	0	2 (2)
Colonic torsion	1 (10)	0	1 (1)
Colonic stricture	0	0	1 (1)
Cardiopulmonary arrest due to hypotension	0	0	1 (1)
Grade 4—Death^f			
Septic peritonitis due to intestinal dehiscence	0	0	3 (3)
Septic peritonitis due to original intussusception	0	0	1 (1)
Septic peritonitis due to mesenteric abscess	0	0	1 (1)
Septic bile peritonitis due to iatrogenic injury	0	0	1 (1)
Recurrent intussusception	0	0	1 (1)
Cardiopulmonary arrest due to pneumonia	0	0	1 (1)
Mesenteric volvulus	0	1 (11)	0
Death at home due to unknown	0	0	1 (1)

Scout, English setter, MI, 2 years

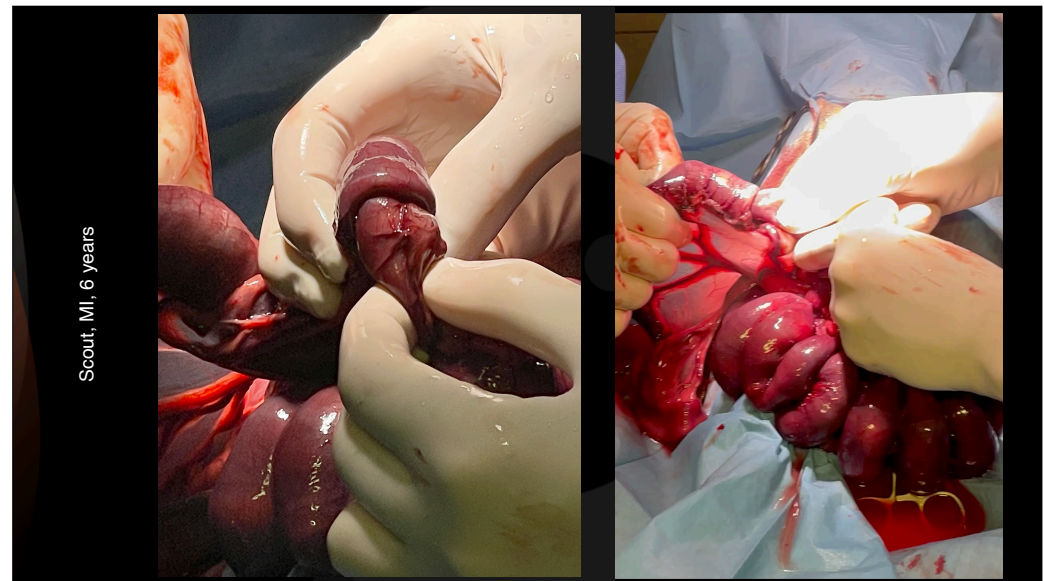
Conclusions:

- Intestinal intussusception with linear foreign body and severe acute enteritis
- Minimal peritonitis and abdominal effusion



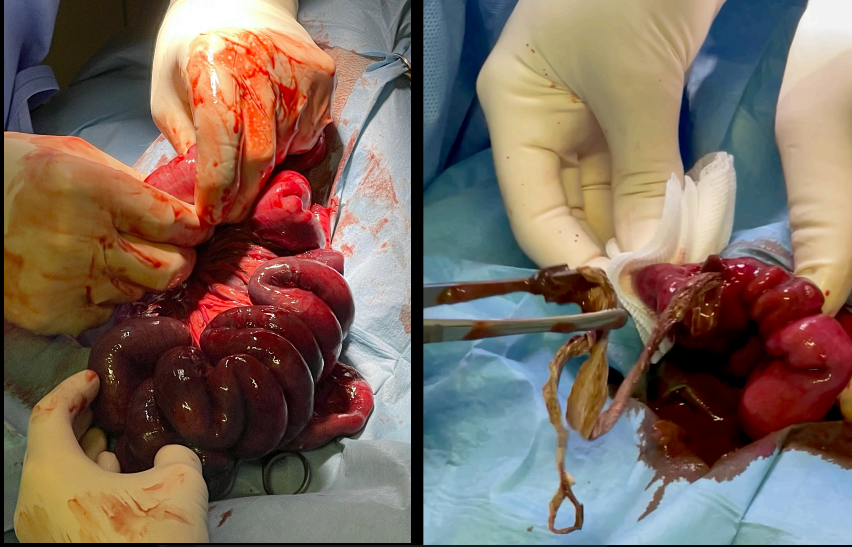
Next steps:

- Laparotomy



Scout, MI, 6 years

Scout, MI, 6 years



Scout, MI, 6 years



Scout, English setter, MI, 2 years

- Plastic bag containing pig bones



Scout, English setter, MI, 2 years

- Intussusception on a linear foreign body
- High risk of surgical dehiscence due to intestinal wall distress

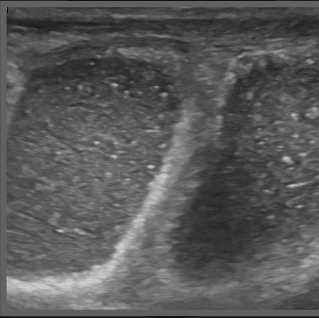


Scout, English setter, MI, 2 years

Radiology



Ultrasound

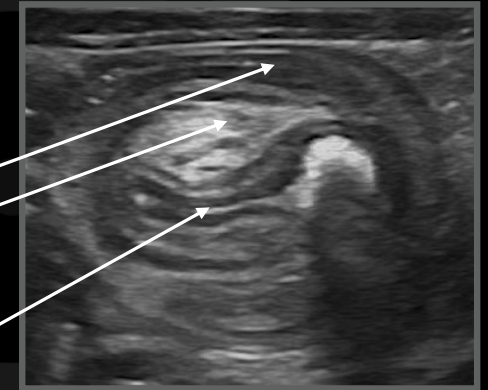


Surgery



Key Points

- Multilayered appearance check on transverse and longitudinal scans
- Intussusciptient thickened and edematous wall, loss of layering
- Hyperechoic, scattering artefact mesenter
- Intussusceptum normal intestinal layering



Thank you



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