Alfaxalone: Clinical use and review of recent literature



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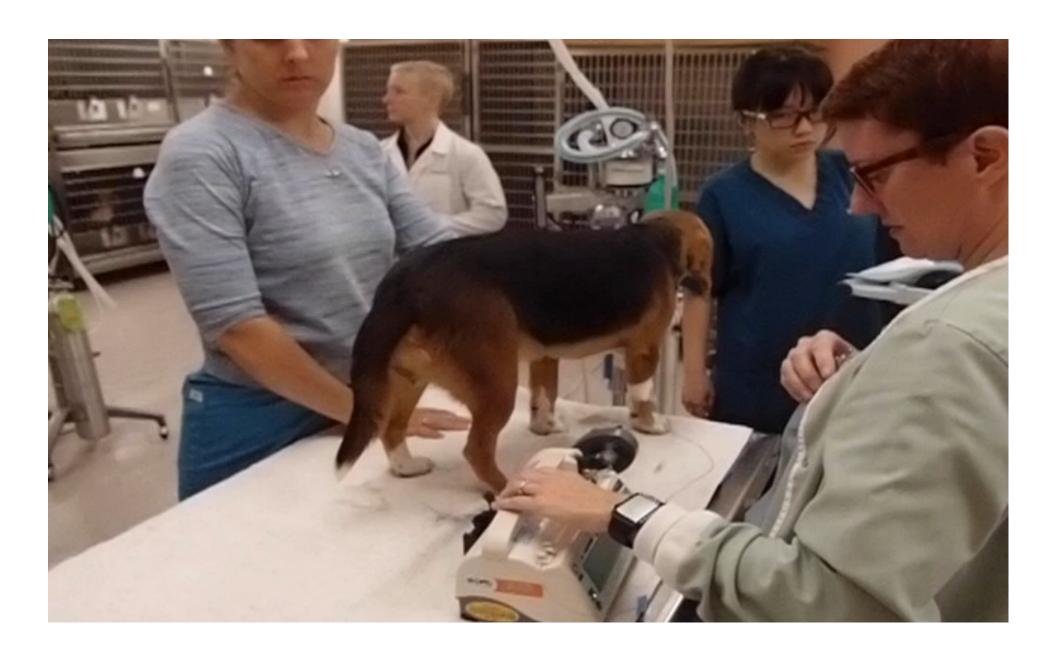
• • Objectives

- Review clinical use of alfaxalone in dogs and cats including case examples
- Review recent literature using alfaxalone in dogs and cats
- Review recent literature using alfaxalone in other companion animal/ exotic species

IV Alfaxalone in dogs

- o Bigby et al. 2017
 - 0.5 mg/kg/min
 - Reduced dose needed for induction and incidence of postinduction apnea
- o Liao et al. 2017
 - 0.3 mg/kg of midazolam reduced induction dose by 36.7%





• • IM Alfaxalone in dogs

- o Tamura et al. 2015
 - IM Alfaxalone results in dose dependent sedation with moderately smooth recovery
- Maney JK, 2017
 - IM Alfaxalone at low doses



• • IM Alfaxalone in dogs

- 3 year-old MN Rat Terrier presented to the AVC for surgical fixation of fractures of the right radius and ulna
 - Previously diagnosed with Addison's disease



IM Alfaxalone in cats

- Ricco et al. ACVAA2017
 - IM alfaxalone with dexmedetomidine and butorphanol compared to ketamine with dexmedetomidine and butorphanol
- Deutsch et al. 2017
 - IM alfaxalone with butorphanol



IM Alfaxalone in cats

- 7 month old F DSH presented for fracture of R femur and L tarsus.
 - Weekly splint changes needed
 - Plan:
 - Dexmedetomidine10 mcg/kg IM
 - Hydromorphone 0.05 mg/kg IM
 - Alfaxalone2 mg/kg IM



• IV Alfaxalone in cats

- 8 year old FS DLH presented to the AVC for evaluation of possible anal sac abscess
 - Previously diagnosed with chronic renal disease



• • Alfaxalone in cats

Complete blood count

Clinical Pathology Hematology Results and Reference Intervals WBC 17 x10E9/L 4.7 -17.0 || WBC Diff. (%) (x10E9/L) || Plasma L RBC 4.76 x10E12/L 6.4 -11.5 || Segs 79% 13.746 || Hemolysis: L HGB 69 g/L 89 - 156 | Bands 3% 0.522 | Lipemia: L HCT 0.221 L/L .28 - .44 || Eos 4% 0.696 || Icterus: MCV 46.4 fL 35 - 52 | Baso 1% 0.174 || MCH 14.5 pg 12 - 17 || Lymph 10% 1.740 || Protein: 68 g/L MCHC 312 g/L 310 - 381 || Mono 6% 1.044 || RDW 15.6 % || Toxic 1+ || Retics 0.89 % *PLTS x10E9/L 306 - 517 || Corr. WBC 17.4 x10E9/L || Absolute (42.36) x10E9/L MPV || Heinz (NONE) PDW *Platelets: Clumped **RBC Morphology** PLATELETS APPEAR ADEQUATE

Biochemical profile

	Sodium	152	mmol/L	149 - 156	11	T. Bili.	1	umol/L	0 - 4
	Potassium	3.8	mmol/L	3.3 - 5.2	IL	Alk.Phos.	6	U/L	14 - 49
	Na:K Ratio	40			11	CK	433	U/L	58 - 489
	Chloride	114	mmol/L	112 - 122	Ï	AST	23	U/L	11 - 44
	Calcium	2.47	mmol/L	2.28-2.85	IL	ALT	19	U/L	34 - 90
	Phosph.			0.94-1.95		Gamma-GT	0	U/L	0 - 6
L	Magnesium	0.71	mmol/L	0.74-1.12	II	T. Prot.	67	g/L	65 - 84
	Urea	8.9	mmol/L	6.4 -11.8	K	Albumin	18	g/L	25 - 37
	Creat.	138	umol/L	67 - 157	1	Globulin	49	g/L	35 - 54
Н	Glucose	7.7	mmol/L	3.2 - 6.7	IL	A:G Ratio:	0.37		0.50-0.90
	Cholest.	3.51	mmol/L	1.80-5.83	1	Lipase	24	U/L	16 - 139

• IV Alfaxalone in cats

- Plan for this cat is daily sedation/ anesthesia for bandage changes
- Premedication with 0.01 mg/kg buprenorphine IV followed by alfaxalone CRI at 0.1 mg/kg/min



• • Questions?

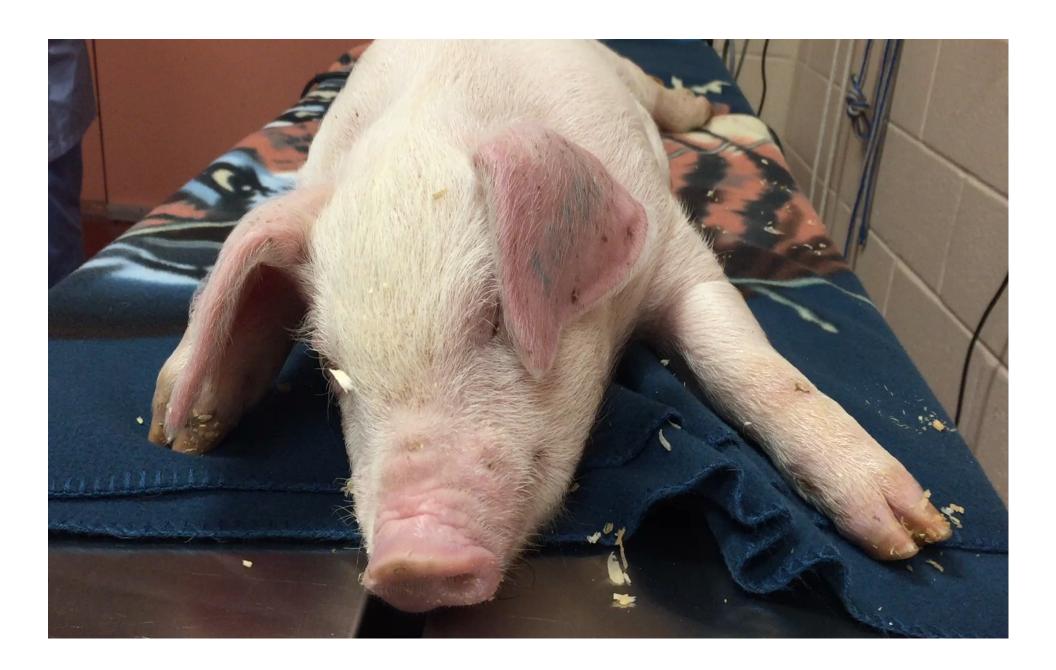
- Slow is the way to go…
- Combine sedatives or analgesics with IM alfaxalone
- Well suited for constant rate infusion



Alfaxalone in pigs

- 4 week old F Landrace cross presented to the AVC for OHE
 - Dexmedetomidine30 mcg/kg IM
 - Hydromorphone0.05 mg/kg IM
 - Alfaxalone3 mg/kg IM





Alfaxalone in guinea pigs

- o D'Ovidio et al. 2017
 - 5 mg/kg IM
 - Onset of sedation approximately 3 min
 - Duration of sedation approximately 30 min
 - No adverse effects were observed



• • What about these pigs???



• • Alfaxalone in rabbits

- Huynh et al. 2015
 - Studied doses of 4,6, and 8 mg/kg IM
 - All rabbits were sedate within 4 min
 - Respiratory depression was observed



Alfaxalone in leopard geckos

- o Doss et al. 2017
 - Dexmedetomidine 0.1 mg/kg + Midazolam 1 mg/kg SC
 - Alfaxalone 15 mg/kg+ Midazolam 1 mg/kgSC



• • Alfaxalone in ponies

- o Deutsch et al. 2017
 - Used alfaxalone to induce (1 mg/kg) and maintain anesthesia (2 mg/ kg/hr) in ponies undergoing field castration



